MODERN PACKAGING

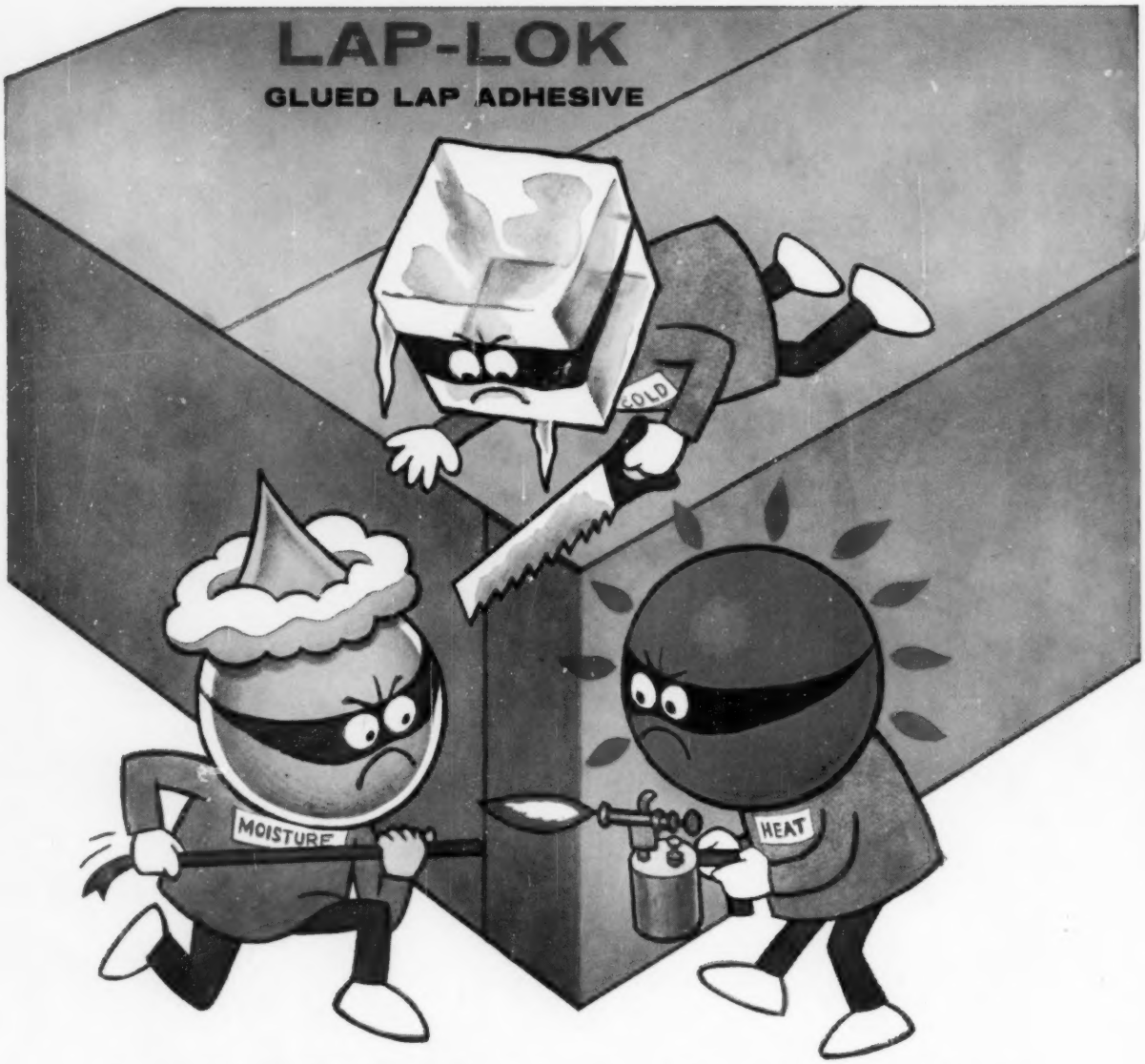
COMPOSED AND PHOTOGRAPHED FOR MODERN PACKAGING BY RAY CICERO

SUCCESS STORY: Tropicana, *p. 104*

Background for Packaging, p. 41 / *World Report, p. 83* / *Editorial Memo, p. 91*

Packaging Pageant, p. 118 / *Cost Cutters, p. 124* / *Complete contents, pp. 2-3*

OCTOBER 1961



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General view *of one of the two huge halls at glass-roofed Olympia, London, during the seventh biennial International Packaging Exhibition. More than 400 companies, occupying 300,000 sq. ft. of space showed major innovations in both machines and materials of key interest to U. S. packagers.*

Report from the British Show

American visitors find much that is useful in the London Packaging Exhibition

In this day of jet-speed travel and with the European economy in a stage of dynamic growth which raises a new marketing horizon for American manufacturers, packaging is becoming more and more an international interest. Each European packaging show draws an increasing number of American exhibitors and American visitors — some there to find new markets for their products, many to seek out the best of European packaging ideas which can be transplanted to these shores.

The peak of U. S. interest was reached last month at the International Packaging Exhibition in London.

To report this event from the American viewpoint, MODERN PACKAGING *sent its Engineering Editor to London. He was assisted in analyzing significant new developments by our London staff. Here, published only days after the close of the big show, is the report.*

LONDON — Some 70,000 visitors from around the world — including more than 100 from the United States — thronged mammoth Olympia Hall here for 10 days at the seventh biennial International Packaging Exhibition, Sept. 5 to 15, and they all had a single interest in common: packaging.

From the opening speech by Lord Cornwallis of Linton, president of the British Institute of Packaging, to the concurrent conference on export packaging (with two American speakers), also arranged by the Institute, the accent was on the international character of packaging developments. Visitors to the 400 elaborate booths could see ample evidence that this was no idle theme. More than 70 foreign firms — including 25 from the U. S. — showed their new packaging equipment and materials. The visitors' lounge rang with almost as many

different languages as are heard at the United Nations.

U. S. visitors picked up valuable tips on machine design, saw important developments in intermediate-speed equipment (particularly for film packaging) and examined some ingenious new containers that have not, as yet, made their appearance in the United States.

A check of exhibitors and the foreign-visitors' lounge revealed that U. S. machinery makers were far more cognizant of the importance of this exhibition than were U. S. packagers. The machinery experts showed up in considerable numbers, not only to promote their equipment to European buyers, but to check on new European machinery that might profitably be built or sold in the U. S. Many European builders who had not already signed up with U. S. companies for the exchange of machinery rights were openly desirous of doing so. To a much lesser extent, this situation also prevailed with the big container and materials manufacturers, many of whom are already tied up with U. S. firms.

As with any European show, some new machines were designed for specialized applications not generally found in the U. S. and a tour of the show made it clear that larger U. S. packagers, generally, would not agree with the European definition of "high speed." But there were many versatile medium-speed units and mechanical ideas that were refreshingly new and which should be of considerable interest to American users. Furthermore, many American packagers with small-scale operations would find standard European speeds well suited.

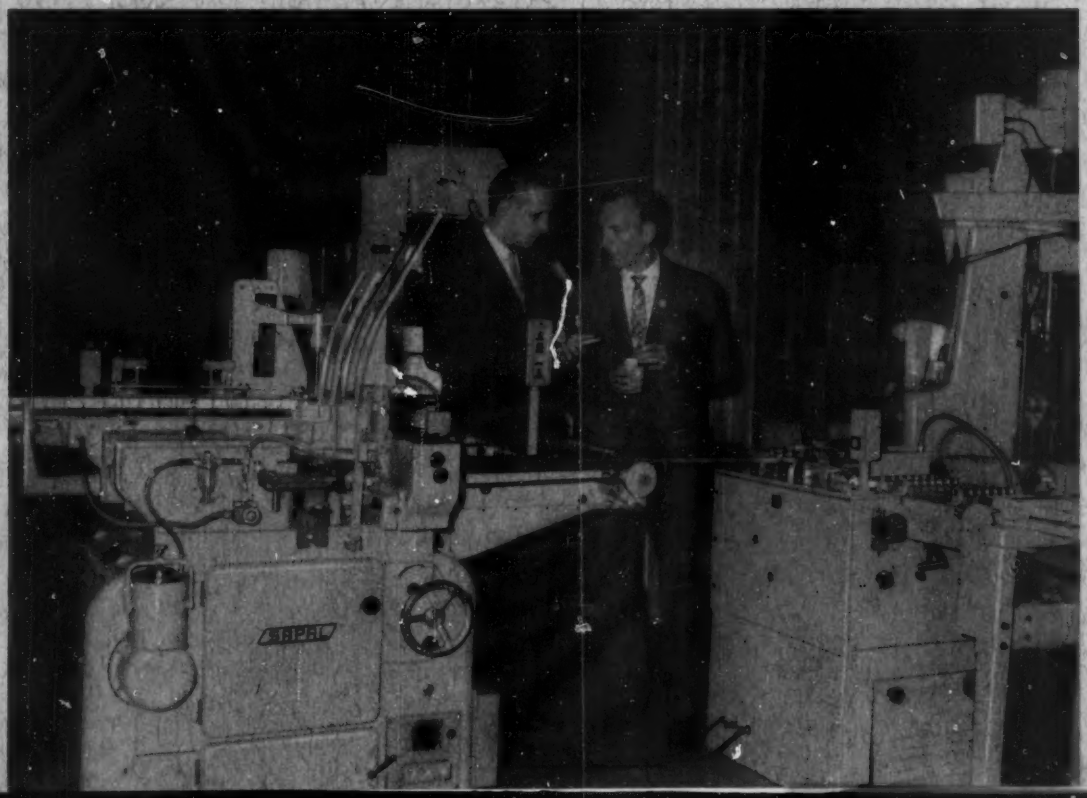
There was a wealth of new ideas in film packaging machinery — both wrappers and pouch packers.

One large exhibitor (The Forgrove Machinery Co., Ltd.) had a whole family of wrappers and both horizontal and vertical pouch packers handling cellulosic and thermoplastic films — all new within the last two years and shown for the first time at this exhibition. One of the most interesting was a horizontal pouch packer for bakery goods which employs a diagonal plow that permits side loading of the product by hand. Rated at 40 per minute, this machine makes a side weld on the pouch and utilizes an ingenious variable-length belt and movable sealing head to support the product-filled web and to close and cut off the package.

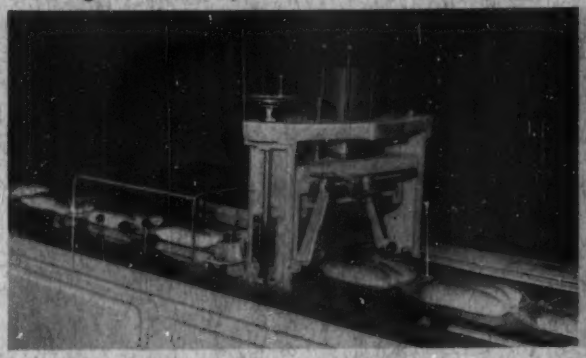
A vertical pouch packer in this exhibit, built for cellulosic films only, couples a sleeve-type film former with a rotary heat sealer to achieve a continuous-motion output of 170 pouches per minute for such free-flowing products as nuts and candies — a high production speed even by U. S. standards.

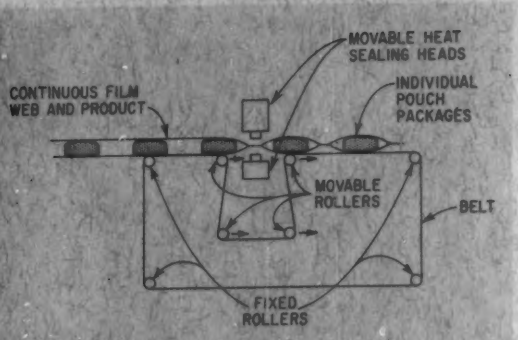
Smooth action on thermoplastic films was exemplified by a new overwrapper (Clavell Bate & Nephews, Ltd.) that was designed particularly for polyethylene, but which has also been successfully tested out on polypropylene, vinyl and other new materials. Most novel feature of this 60-per-minute unit is the bottom sealer, which is a flexible "bag" made from a special silicone rubber and containing a thermoplastic heat-carrying material, the identity of which was not disclosed.

New high-speed cartoner *assembles and stacks small rectangular products on right-angle in-feed (right), then literally wraps the carton blank around the grouping (left) at speeds up to 140 cartons per minute. Mechanical action is explained to* MODERN PACKAGING*'s engineering editor, Robert J. Kelsey (left), by Kurt Beyertz of Hamac-Hansella-Sopal, Ltd.*



The Forgrove Machinery Co.





Versatile pouch packer *for bakery goods has a piston-propelled heat sealer that travels with the web to make final seam and cut-off. Film-wrapped products ride on a belt that changes in length as heat-sealing head moves by means of a clever system of traveling and fixed rollers (sketch, right).*

Designed to adjust automatically to minor variations in package shape, this unique component delivers uniform heat and pressure and consistently produced excellent seals while running at the show.

Another feature on this overwrapper is a system of micro air valves, to control the stroke of the main pneumatic cylinders that propel the package through the machine. By automatically throttling piston exhaust, these controllers adjust for minor variations in both package and thermoplastic film and can be overridden with hand controls for major adjustments. Web registration is automatically controlled by a cleverly adapted reversing motor that is hooked in with the photo-eye and actually reverses the spin of the web roll to put the design in register.

Particular advantages of all of these film-packaging machines are their fast change-over and broad adaptability to products of widely differing size and shape.

Closely akin to the film packagers is a new bundler (Ayers & Grimshaw, Ltd.) that is both compact and extremely versatile — an ideal unit for many short-run U. S. bundling applications for special deal packages. Running at 30 per minute on a paper web, this machine can be changed over between wide limits within about 15 minutes. Grouped products are introduced through a side feed and pushed through the web in conventional style. However, all folding actions are compressed into one station, utilizing movable paper folders. This shortens both the forming and the compression sections of the machine compared with standard units.

Two other machines that form special packages from flat webs of film or paper also were interesting.

One of these is the Tetra Pak machine, completely redesigned to double output to 120 tetrahedral-shaped, plastic-coated paper containers per minute. The new design drastically reduces the number of mechanical parts needed to form this package and also incorporates a web-scoring and folding device that for the first time permits plastic-to-plastic seals on the longitudinal seam in the tube of polyethylene-coated paper. Two heat-sealing bars, opposed at 90 deg. and working in a hand-over-hand manner by cam action, have been substituted for the previous chain-mounted multiple sealers.

Another machine (R. W. Barraclough, Ltd.) forms a radically new type of rectangular "bag," resembling a peaked paper milk carton, that is made from 3- to 5-mil high-density polyethylene and, therefore, is semi-rigid. Formed from gusseted lay-flat tubing on an intermittent-motion 12-station unit, the package is hermetically sealed and reported practical for such liquid food products as fruit juices and milk. While the package could find some uses in the U. S., the prototype machine probably needs to be simplified.

There were ingenious developments in machines for check weighing, tablet packaging and cartoning.

Check weighers, in particular, were abundantly visible — apparently revealing current English and European concern, as in the U. S., over stiff labeling regulations. One of the most interesting was a 20-per-minute machine for automatically checking shipping cases (W. & T. Avery, Ltd.) that utilizes an ingenious and simple series of large ball bearings as a transfer conveyor to get cases onto the accurate weighing head and to reject and return off-weight shippers that vary by as little as 1 oz. from the desired weight.

A small and inexpensive unit-packaging machine (Gordon & Gotch, Ltd.) that can be changed over in minutes and cycles at 120 units per minute was seen at another stand. It will pouch pack tablets in single-, double- or strip-style pouches and could be of considerable use to pharmaceutical packagers with many short runs because of its economy and small size as well as its simple mechanical construction.

Significant because of its high speed was a new cartoner and bundler (Hamac-Hansella-Sapal, Ltd.) which assembles small rectangular products (such as bouillon cubes) and literally wraps a carton around the products at speeds up to 140 cartons per minute.

What was said to be the first completely automatic sleeving machine for light bulbs was shown at yet

another exhibit (Ayers & Grimshaw). Rated at 40 strokes per minute, this rotary intermittent-action unit puts both collars and corrugated sleeves around bulbs.

Design Innovations

In addition to new machines, the added value of this show for U. S. engineers was the opportunity to find mechanical innovations on old and new equipment reflecting interesting advances by European designers.

One such device was a new flexible power-transmission cable (Flexball) developed in Germany and utilized on both the Tetra Pak unit and on a new 160-per-minute-tablet vial filler (Hofliger & Karg). Particularly useful for transmitting straight-line motion to remote locations, this device consisted of a flexible plastic tube (that appeared to be made from vinyl) which was filled with large steel ball bearings and fitted with plungers at both ends. A cam motion actuated at one end is thus translated into an identical movement at the other through linear displacement of the balls, regardless of how the tube is positioned or twisted.

A simple solution to the complex problem of moving limp thermoplastic films through tube-forming sections of pouch packers (presently the subject of much U. S. research) was shown on several two-year-old vertical form-fill-seal units (Hassia Packaging Machines, Ltd.). It consisted merely of a power-driven V-belt on spring-mounted rollers. Located on the filling tube opposite the longitudinal heat sealer, this inexpensive device pulled the film into position for heat sealing with a minimum of strain and film distortion.

And a most ingenious and positive method of separating a single line of cans into six lanes was discovered on what is reported to be the first end-loading can caser of British manufacture (Frederick C. Kane, Ltd.). The cans enter in single file on a link-type chain conveyor and are spread by the action of a small, spinning paddle wheel, turned by a minute gear-head motor. Further spreading action is given by six flat-topped chain conveyors that run at different speeds, the two center belts moving faster than either of the outside pairs.

Tetra Pak

New tetrahedral packager *has a greatly simplified heat-sealing head that operates by means of hoses filled with steel balls (arrow). Cam motion is transmitted from main drive through this flexible connector with only a minimum of mechanical linkage.*

Packages and materials

As in the U. S., plastics — primarily polyethylene — were dominant in all forms. Blow-molded containers were numerous and ranged from tiny bottles to 50-gal. carboys which were shown both unsupported and confined in wire, paperboard and steel shippers. While most were similar to U. S. containers, one blow-molded package was outstanding in design — a polyethylene bottle and stopper, blow molded in one operation and then cut apart in a second step (Holloway Containers, Ltd.). Stopper for this decanter-type bottle is secured by lugs, blown into top and bottom during molding.

Experimental blow-molded bottles in acetate, PVC and polypropylene were also on display, at this and other stands, though British suppliers have had as much trouble as their U. S. counterparts in promoting their use in bottles. Despite their functional advantages, price and molding difficulties, in some cases, are barriers.

A going commercial package was an injection-molded polyethylene cup, made from a low-density material, that is hermetically closed with a crimped metal cap or can be simply capped with a molded polyethylene cover when a hermetic seal is not necessary (The Metal Box Co., Ltd.). Available for about a year, these "Polypots" can now be handled on a new 40-per-minute filling and closing machine, equipped with a steam-flow device that makes the package practical for vacuum-packed products. The container has already been used for salad dressings, jams, jellies, honey and other similar products in Britain and could make an interesting container for premium products in the U. S.

The plastic lids can now be printed by a new three-color offset process and bodies of the cups are decorated on conventional offset bottle-printing equipment.

The challenge of a flexible packaging material for

food products that can be heat processed (only now being solved in the U. S. with a polyester-foil-vinyl lamination) is of equal interest to European suppliers and packagers, and has been resolved with two relatively new materials, one of which is probably less costly than the American lamination.

Consisting of a 0.025-in. aluminum foil coated with 1 mil of high-density polyethylene (Venesta Foils, Ltd.), this flexible web has been fully tested in steam-processing equipment with various food products at temperatures up to 240 deg. F. for periods of 60 minutes. The material was reported to cost 1.3 cents per 1,000 sq. in. in England and though this price would probably bear no relation to its cost in the U. S., it is economical.

The other tough, heat-resistant material was a nylon-type film (Ralsin) that has been available in Europe for some time, but has only recently begun to attract attention outside France (where it is known as Rilsan). It got a big play in London (exhibited by Felber, Jucker & Co. and Whiffen & Sons) as a result of its use by the famed English explorer, Eric Shipton, for packaging food on his recent expedition to Patagonia.

Shrinkable films, which made such a strong impact at the recent AMA Show in Chicago, have just started to appear in England and only one example — a blown polyethylene with 15% shrink — was seen at the London Show. But a stretchable polyethylene that is equally new got active attention at the same exhibit (Visqueen). Possessing an extremely high viscosity, the low-density material was heated to the softening point in a hand jig and the product was simply dropped onto the film, which stretched into a bubble and encompassed the item. A simple twist secured the "wrap." So strong and elastic was this film, specially treated by an undisclosed process, that an umbrella was plunged into a softened square of film only 8 in. square without breaking the film.

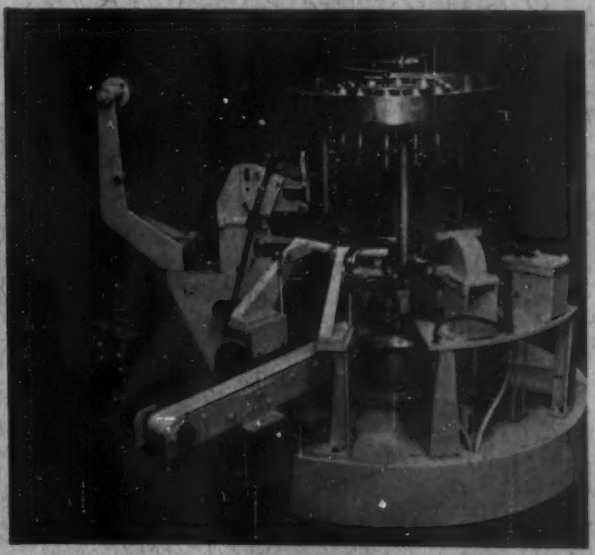
A considerable number of molded polystyrene-foam containers for both consumer and industrial products was noted. There were several exhibits of polyethylene netting, which is coming into greatly increased use in this country for fresh produce items and combination deal packages. Blister packaging, too, seems well established, though forming equipment appeared to lag. Polyethylene film — in wide use in England — was mostly low-density type. Very few medium- or high-density materials were on view and polypropylene film is still not commercial in England, though European suppliers expect to have all of these materials available shortly.

Conference takes consumer packaging for export as its theme

The overriding theme of internationalism that pervaded the International Packaging Exhibition was further exemplified by the concurrent conference on export packaging, featuring American and European speakers.

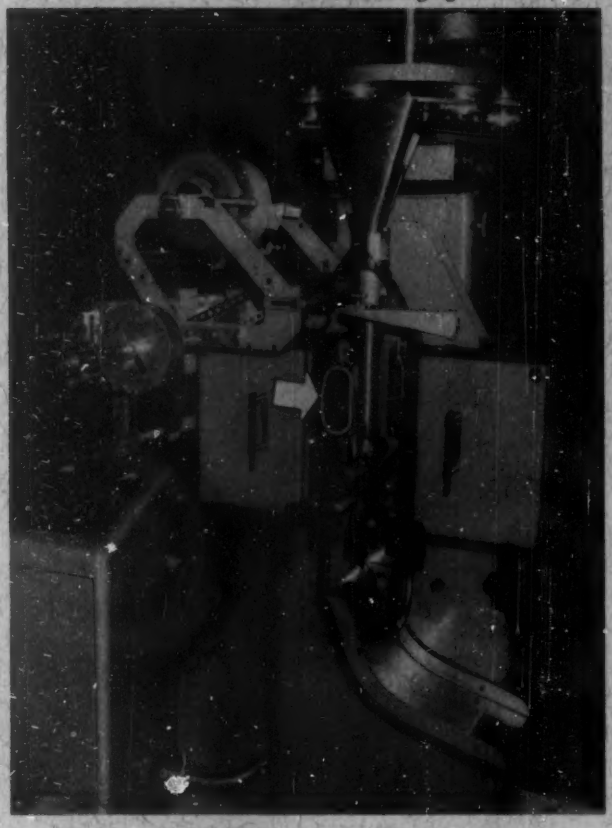
The conference, entitled "Consumer-Goods Packaging for Export," consisted of four one-day sessions, with the speeches followed by discussion periods. Speakers included two Americans: Joseph P. Kasper, chairman of the Associated Merchandising Corp., New York, and W. G. Ohme, marketing director of Beecham Products, Inc., Clifton, N. J.

At a session on North American household and store products, Mr. Kasper said that packaging is "one of the biggest potential expense-saving factors of any element in retail distribution today," thus dictating the elimination of wasteful packaging. He urged Euro-



Rectangular plastic 'bag' *developed in England for soft drinks is made on special 12-station machine (right) from 3- to 5-mil high-density polyethylene lay-flat gusseted tubing. Heat sealed with flat base and peaked top, the container can also be equipped with heat-sealed foil and polyethylene tear strip. Bag and machine by Cascelloid and R. W. Barraclough, Ltd.*

Hassia Packaging Machines, Ltd.



Ingenious idea *for facilitating feed of limp thermoplastic films in a pouch packer and also for relieving strain and stretch on the material is this simple V-belt, driven by two spring-mounted pulleys (arrow). It has been in use on several models of this form-fill-seal equipment for about two years.*

pean exporters to "police inner wrappings to reduce unnecessary cushioning to a minimum" and to choose proper "unbulky" crating for goods shipped to the States "where excess weight can torture profits."

Mr. Ohme also had a word of caution for exporters at a session on pharmaceuticals and cosmetics packaging. He urged close, personal analysis of export markets, creation of effective packaging with proper promotional and advertising support and constant attention to changes in consumer likes and dislikes. "You must," he said, "face up to the problem as it exists in the particular market and not try to wishfully think it away with misinterpretation."

Tage Nystrom, head of A. B. Adaco, a leading Swedish importer, received general support for his viewpoint that packages which sell goods on the home market do not automatically match up to export needs. He added that the presentation of all medium- and low-priced consumer goods must be exactly related to the social and economic background of each particular country.

The slogan "Know your markets," in fact, was the principal message in the first session on food packaging and in the third and fourth sessions for businessmen who came to learn about the best ways to package (a) hardware and (b) textiles and clothing. But delegates seeking more specific answers from the sessions were disappointed. Likewise, those who expected that a conference entitled "Consumer-Goods Packaging for Export" would pay considerable attention to the physical hazards involved got little information. What they did get, however, were two informative accounts by Mr. Nystrom and M. Andre Eliade of the conditions affecting the sale of packaged products in Sweden and France that could apply to many other countries.

Sweden now has a higher proportion of self-service outlets than any other country in Europe. And by 1965, according to Mr. Nystrom, it will have overtaken the USA in this respect. Swedish housewives will then be buying some 70% of all consumer goods through self-service stores and supermarkets. As a result, packaging has become an important instrument of distribution and high standards of presentation and protection are customary. That country also has a strong consumer movement and close attention is paid to the quality and nutritional value of a product. The average Swedish shopper also wants full information in her own language on any food or pharmaceutical product she is buying.

Mr. Nystrom stressed the importance of using accurate Swedish text on packages for imported products. The only exceptions to this rule are luxury cosmetics and similar items. Differentiation of vowel sounds is crucial and, in most cases, it is advisable to send proofs to Swedish importers for checking. Sometimes it is necessary to change the name of a product because it has an unfortunate double meaning, as happened recently with a top-selling British detergent.

Size is another important factor. Sweden has a small population (7,500,000) scattered over a wide area and this makes it important that shipping cases should be strongly constructed and not too large. Home storage space is limited and the tendency is to buy little and often. Most Swedish housewives visit their grocery stores every two days. Demand for king- and jumbo-size packages is, therefore, not very high.

M. Elaide, chairman and managing director of Societe Transmap, Paris, listed the food products which could be successfully exported to France, where food represents 40.6% of the average family's budget. He also highlighted two recent trends in beverage packaging in France — the growing use of fancy glass and of ceramic bottles for wines and spirits, and the boom in canned soft drinks (56% vs. 44% in bottles).

French packaging standards for food products, he said, are the same as for the rest of Western Europe, including Britain. One notable difference is that French housewives place great value on re-usable containers. Women's magazines publish lists and prices of products whose packages have after-use value.

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IN THIS ISSUE OF MODERN

OCTOBER 1961 / VOLUME 35 / NO. 2

Special Editorial Report, inside front cover. Why do American packagers attend European packaging shows? And why are American packaging suppliers becoming increasingly interested in Europe as a market? MODERN PACKAGING's editors have gone to London to find the answers at the Seventh International Packaging Exhibition; this special airmail supplement is published only a few days after the close of the big London show. Six pages, with illustrations.

93 **Piloting the test market**
How can a packager avoid the pitfalls that doom most new products to failure? The best answer is to follow established ground rules for consumer and market research. Here's a detailed study—with case histories—of a four-stage research plan that can minimize the risks that accompany the launching of a new product or a new package.
General interest.

98 **New principle in pouch packaging**
Morton Foods simplifies pouch packaging of such awkward, hard-to-feed products as potato chips with a new twin-head machine in which the film formers move and heat sealers are stationary. A special trough feed and filling cone permit gentle loading of chips at rapid pouching speeds.
A production-methods article: foods.

FRONT FEATURES

41 **Background for Packaging**
Capsule comments and notes on significant news.

54 **Equipment & Materials**
Important new products from suppliers.

67 **Sounding Board**
We ask the readers: How can "deceptive packaging" be controlled or eliminated?

83 **World Report**
What's news in foreign packaging.

91 **Editorial Memo**
"Season of decision in packaging."

101 **Upgrading the sky lunch**
What design ingenuity can do to improve package appearance and convenience at little added cost is illustrated by the taper-sided box in which American Airlines serves coach-flight meals.
Special interest: foods, institutional packagers.

102 **Rinso Blue in a metered carton**
Hot competition among soap companies gets a new entry as Lever Bros. adopts a four-year old packaging idea to provide measured-quantity convenience in consumer use of powdered detergent. The carton is run on regular filling equipment.
Special interest: dry, free-flowing products.

104 **Tropicana**
A *Success Story* (see cover). Early recognition of a market for whole Florida orange juice packaged and distributed like cartoned milk launched Tropicana Products on an impressive marketing success. Backed by aggressive promotion, the firm has made its mark in direct competition with established frozen citrus concentrates in cans.
Special interest: beverages, foods.

108 **Redesign for Autolite**

Ford Motor's new parts division bids to match its top competitor with a clean, modern package format and a unifying graphic trademark for hundreds of sizes and types of containers.
Special interest: hardware, designers, sales.

112 **The 'deception' pot still boils**
Resumption of Hart hearings into "deceptive packaging" awaits Senate adjournment. Meantime F&DA intensifies its drive against short weight and inconspicuous labeling; packagers crystallize efforts to avert future charges of hoodwinking.
General interest.

114 **Success with PVA**
A small newcomer to the washing-products field builds a success around water-soluble pouches. The tricks it has learned about handling PVA on a modified former-filler-sealer eliminate many problems in production, costs and performance.
A production-methods article: detergents.

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117 **Rayon-fibre strapping in action**
Lightweight, flexible rayon banding material produces big economies for an industrial user. The easy-to-handle strapping is found to hold fast under the jolts and stresses of transport.
Special interest: heavy-duty bundling, shipping.

120 **Roll-feed combined wrap**
A trend toward "single-wall" protection in wraps is suggested by the experience of a Swedish packager of chocolate. The firm reports a 20% cut in material cost and a 10% gain in operating speed since adoption of a single, laminated, paper-and-foil roll-feed wrapper for bar candy.
Special interest: foods, confections.

122 **New plan for the Institute Forum**
Packaging Institute's annual National Packaging Forum this month in New York will feature a streamlined program of carefully coordinated seminars and speeches. Broadening of packaging technology is the theme of this year's Forum.
General interest.

126 **Shipping bags of PVC**
Italian chemical firms adopt a new contender in the plastic-shipping-container field: a valved, heavy-duty polyvinyl chloride bag that speeds filling and offers long-term moisture protection.
Special interest: chemicals and fertilizers.

130 **Ideas from the military**
Commercial packagers can profit from new ideas and techniques in military packaging being developed by the Quartermaster Corps. Among them: a skin pack for fabric items that reduces bulk by 75%; a bag-in-box container for freeze-dried foods that boasts a three-year storage life.
General interest.

Miscellany
PMMI Show, Conference (p. 207) . . . Hazardous-Substances Labeling Regulations (p. 218) . . . MSU Packaging School News (p. 228) . . . Kaiser Aluminum Can-Stock Line (p. 223) . . . F&DA Drug Regulation (p. 226) . . . Packaging Institute Publications (p. 226) . . . Canco to Can Soft Drinks (p. 235) . . . Packages Win New Legal Protection From Imitation (p. 243).

TECHNICAL & ENGINEERING

135 **Effect of moisture on carton scores**
In low-humidity atmosphere, cartons with perforated scores perform better on set-up and filling lines than do cartons with standard scores. But where humidity is usually high, there is no advantage, indicating the need for further study to improve carton performance at high and low moisture levels. *By William Schoenberg.*

140 **Standards for electrical diagrams**
The complex circuitry of modern packaging machinery necessitates a code of symbols and supplementary data to speed maintenance and cut down time. Here is a suggestion for a standardized wiring diagram that may facilitate understanding of electrical functions. *By Frank R. Cinco.*

145 **Centralized packaging research**
Diversification of product lines has increased the importance of coordination and direction of packaging research. This study of Continental Can's giant but tightly centralized research and development facilities emphasizes the value of interchange in getting maximum results from scientists and equipment. *By Robert J. Kelsey*

150 **Questions & Answers**
Advice on readers' technical problems.

DEPARTMENTS

106 **Ideas in Action**
The why and how of outstanding packages.

118 **Packaging Pageant**
Picture gallery of the best of the month.

124 **Cost Cutters**
How better packaging can be had for less.

154 **Plants & People**
Company expansions and personnel changes.

192 **For Your Information**
Association news, book reviews, coming events.

200 **U.S. Patents Digest**
New issues of importance to packaging.

209 **Manufacturers' Literature**
Valuable data, yours for the asking.

256 **Index to Advertisers**
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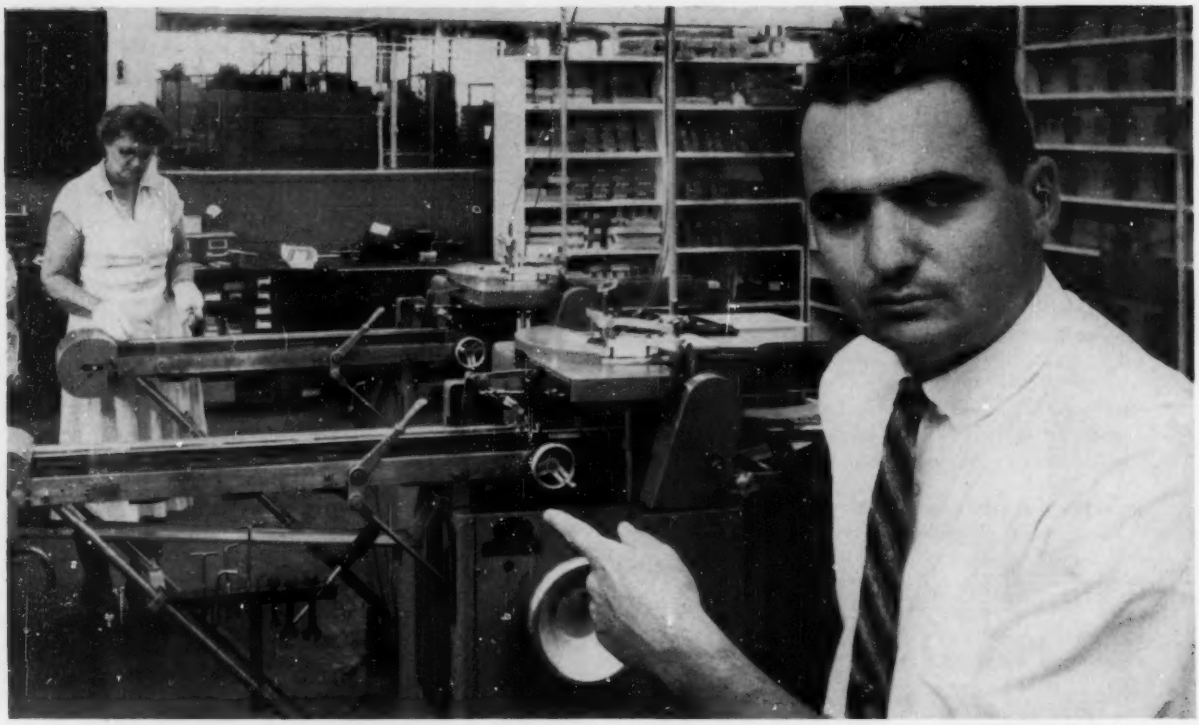
ABC ABP

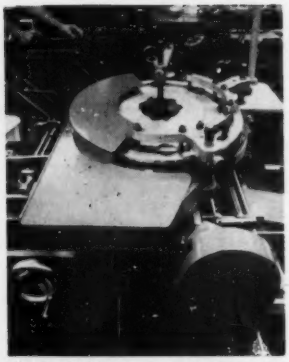


"These WRAP-KINGS play a big part in our cost-cutting program."

says Mr. Stephen A. Wood, Chief Industrial Engineer, Hoover Ball & Bearing Company, Ann Arbor, Michigan

"Hoover's DW WRAP-KING machines were installed at a time when we were in the middle of an all-out program to increase production and find new ways to cut costs. These machines provided a high degree of efficiency and flexibility in handling a wide range of individually wrapped bearings. By freeing personnel for more productive work, they helped achieve significant savings.

"Furthermore, downtime with our WRAP-KINGS has never been a problem. The painstaking care and thoroughness with which the C & K people installed these units and indoctrinated our people exceeded any we've ever observed. We've never needed a service representative from the factory since our WRAP-KINGS were installed . . . almost two years ago."



WRAP-KINGS in use at Hoover Ball & Bearing are adaptable to accommodate 50 different bearing types, with changeover taking as little as 3 or 4 minutes. Due to exceptional machine flexibility, large runs can be interrupted to fill urgent orders.

Hoover Ball & Bearing's successful experience with the DW WRAP-KING is typical of manufacturers and packagers all over the country. Cost reduction through high speed automatic packaging is the special ability of Crompton & Knowles Packaging. Whatever your particular requirements may be, from a single machine to completely integrated lines, C & K know-how can provide the most efficient answer. For complete details, and leasing arrangements, write Wrap-King Division.

C&K Stands out in PACKAGING

REDINGTON AUTOMATIC MACHINES for CARTONING WRAPPING • SPECIAL PACKAGING

CROMPTON & KNOWLES PACKAGING CORPORATION

WRAP-KING DIVISION Agawam, Mass.

REDINGTON DIVISION Bellwood, Ill.

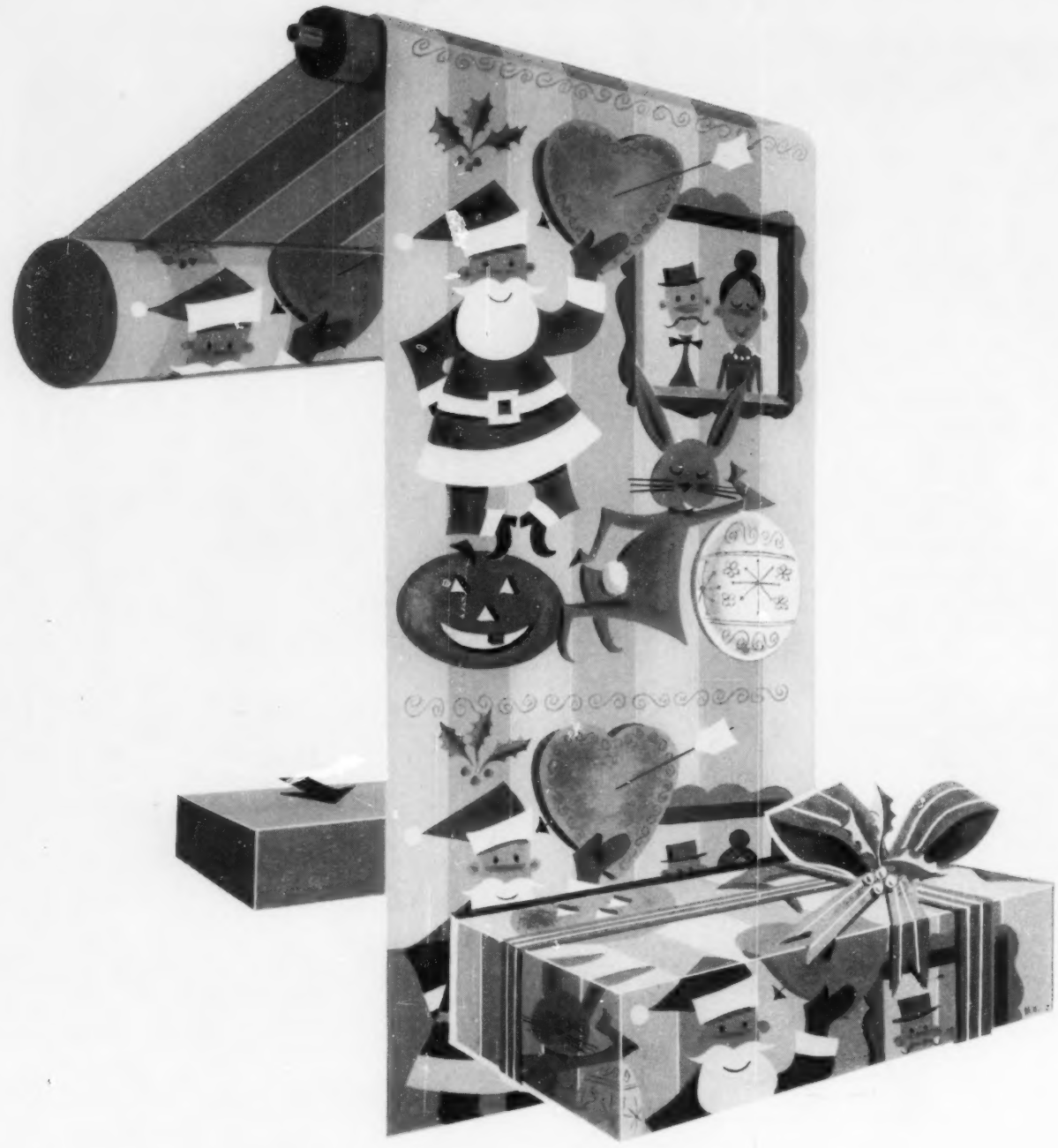
INTERNATIONAL SALES AND SERVICE OFFICES: NEW YORK CHICAGO ATLANTA WINTERHAVEN, FLA. DALLAS TORONTO MONTREAL MILAN ZURICH LONDON: CLAVELL BATE AND NEPHEWS, LTD.

Do housewives a favor and watch the sales go up. New polyethylene bags by Dobeckmun create new economies for housewife and packer alike! Easy way to capitalize on new individual quick freeze techniques. Just ask Ore-Ida!

packages for performance

DOBECKMUN

New polyethylene bags take special film that's tough enough to avoid breakage and can survive long distance shipping . . . beautifully. That's transparent enough to take the harsh light of commercial freezer cases and still present fruits and vegetables at their persuasive best. That's economical enough to be practical for almost any length run. And Dobeckmun gives you the vital extra ingredient of creative originality that gives your package the extra profit potential you need to compete. For new packaging success in food, textiles, paper and your products—call us today! THE DOBECKMUN COMPANY, A Division of The Dow Chemical Company, Cleveland 1, Ohio · Berkeley 10, California · Offices in most principal cities.



WRAP UP HOLIDAY SALES WITH SCANDIA OVERWRAPS

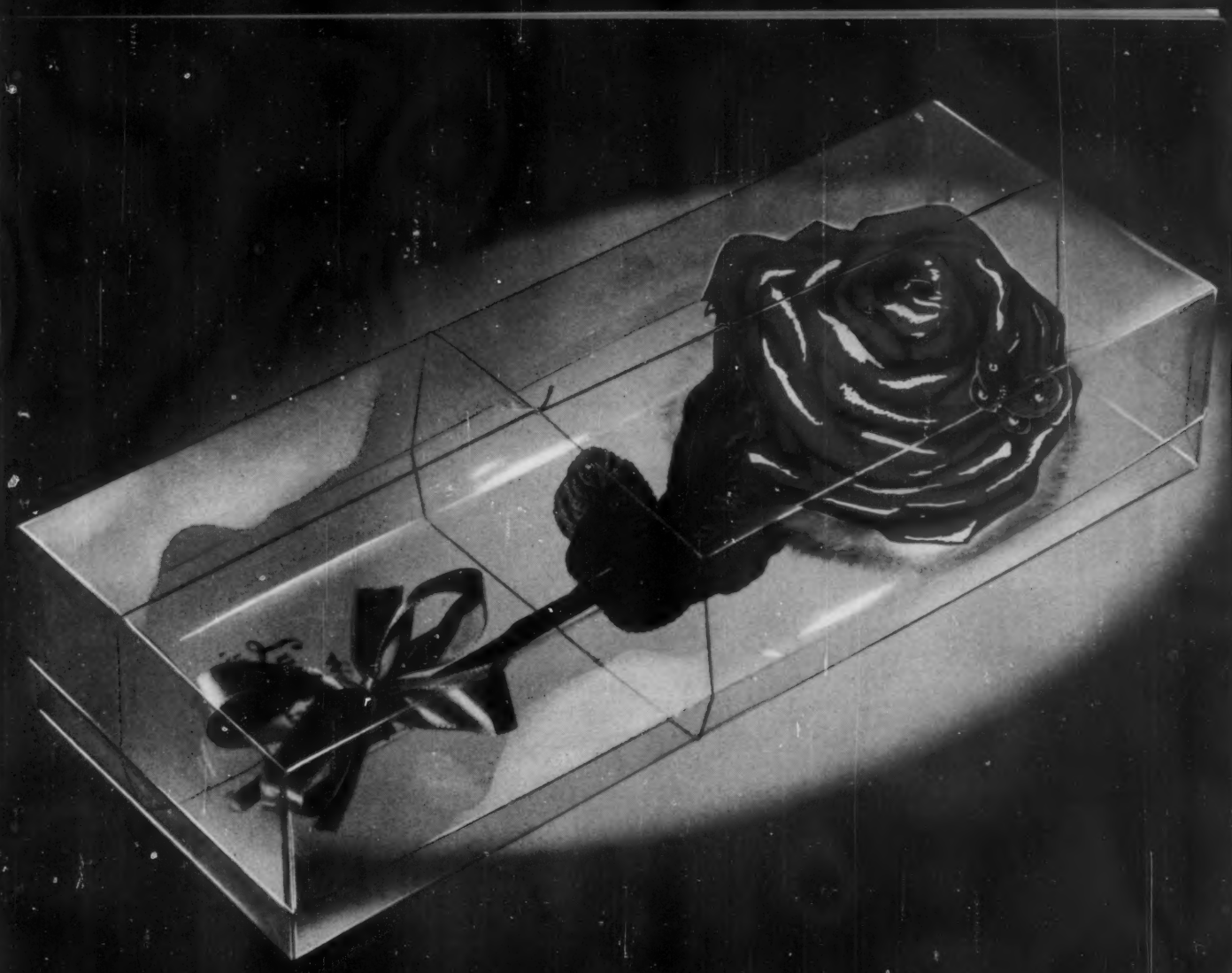
Many of the pioneering users of "holiday wrapping" relied on Scandia for assistance in setting up production of attractive packages at minimum cost. Why not take advantage of this experience to help you avoid production pitfalls?

If you are thinking of holiday packaging, ask your converter today for ideas for your products. Then call or write:

Scandia Packaging Machinery Company, North Arlington, New Jersey, WYman 1-8400.

SCANDIA
MEANS CRAFTSMANSHIP

Visit Scandia's exhibit, Booth 511 at PMMI Show, Cobo Hall, Detroit, November 7-10.



DAVIS ACETATE adds a touch of elegance!

It looks like a corsage from one of Fifth Avenue's elegant florist shops —actually it is a Lushus deep pile lambswool powder puff in the form of an American Beauty Rose, marketed by Victoria Vogue, Inc., Glendale, N. Y. The illusion of a glamorous corsage is heightened by the packaging—a rectangular container for which Davis Acetate was selected because of its brilliance, clarity, and ability to stand up under unusual handling and merchandising conditions.

Davis extruded acetate sheets, rolls and film come in all gauges—transparent, translucent or opaque—and are ideal for all kinds of vacuum forming applications. We have been supplying the packaging industry with plastic materials for over 40 years, and we welcome the opportunity to help packagers with their problems. Let us send you a brochure describing our facilities and the wide range of plastics we produce, together with details on their properties and applications.

PRODUCT AND PACKAGE BY VICTORIA VOGUE, INC. • EXTRUDED ACETATE BY JOSEPH DAVIS PLASTICS CO.

JODA

Joseph Davis

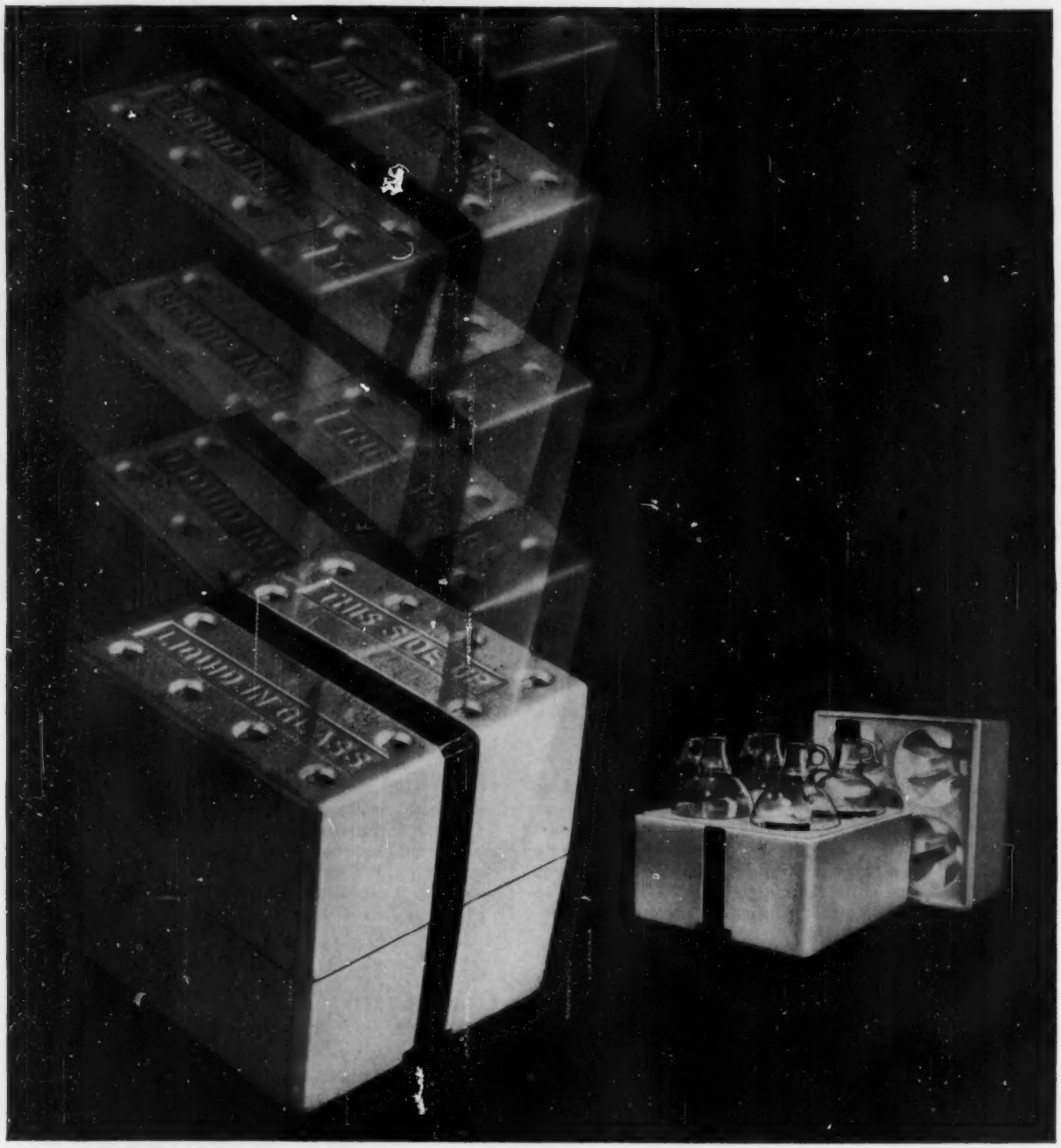
PLASTICS COMPANY

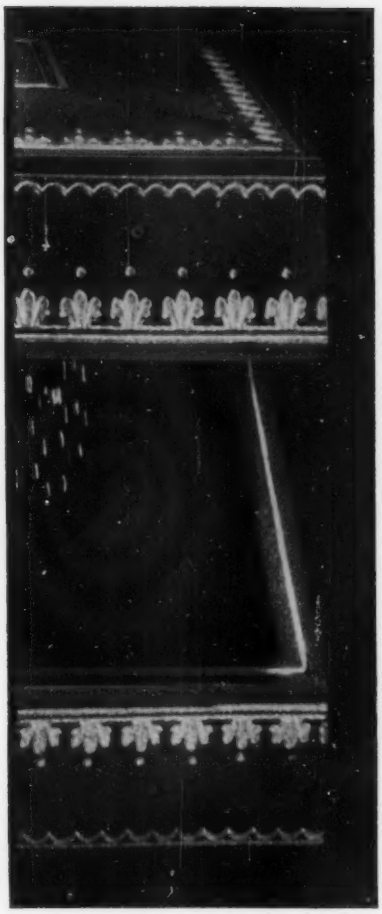
430 Schuyler Avenue, Kearny, N. J.

Phone: WYman 1-0980 New York: BArclay 7-6421

They couldn't break these acid bottles

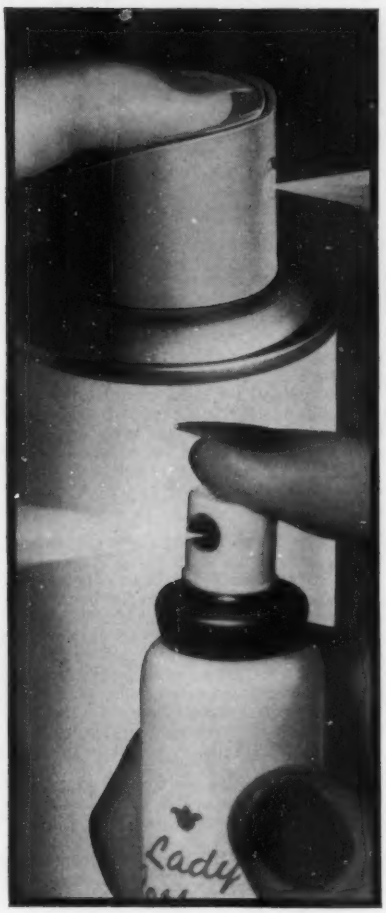
These acid bottles were undamaged after a staggering ICC drop test: 16 falls from four feet. Secret is the 1¼ pound molded foam plastic case made from rigid, weather-resistant, chemical-resistant, shock-resistant DYLITE® expandable polystyrene. Developed by Allied Chemical's General Chemical Division, the case is used for its Baker & Adamson reagent acids. It has molded-in finger grips and interlocking top and bottom stacking grooves. More and more manufacturers are turning to DYLITE packaging because of its ultra-light weight, excellent cushioning and the ease with which it can be molded into intricate shapes at low cost. Since DYLITE can be colored or decorated in many attractive ways, it can make a package that's also a good-looking point-of-purchase display.





Plastic watch case looks like leather

This Wyler watch case is hard to distinguish from one made of leather, yet it's molded from tough, less expensive hi-impact DYLENE® polystyrene. It opens and snaps shut without chipping or troublesome cracking around the hinge. The deep red case is molded to a pebble finish and heat-stamped with metallic gold trim. Box designed, molded and manufactured by Custom Manufacturing Company, Jersey City, New Jersey.



Push-button age needs plastics

Today's housewife spends a lot of time pushing buttons. The obliging Valve Corporation of America supplies her with aerosol actuators and caps molded of SUPER DYLAN® high-density polyethylene. They (1) cost less than metal, (2) are easier to assemble, (3) have a smooth, glossy, rust and stain-resistant finish that can't chip or dent. Avon, Revlon, Coty, Lanvin, Fuller Brush, Stanley Home Products and Simoniz are just a few users.

Put $170.00 in your pocket

High-speed packaging machines now make it possible for you to save real money—as much as $170.00 on each 1,000 pounds of the crisp, clear film you may now be using—and still have a better package! How? Use film made from SUPER DYLAN® high-density polyethylene and take advantage of its unidirectional, straight-line tear, low permeability and clarity. Furthermore, it is unaffected by extremes in temperature and humidity.

KOPPERS PLASTICS

For complete information about Koppers family of fine plastics for packaging, write Koppers Company, Inc., Plastics Division, Dept. 123, Pittsburgh 19, Pa.

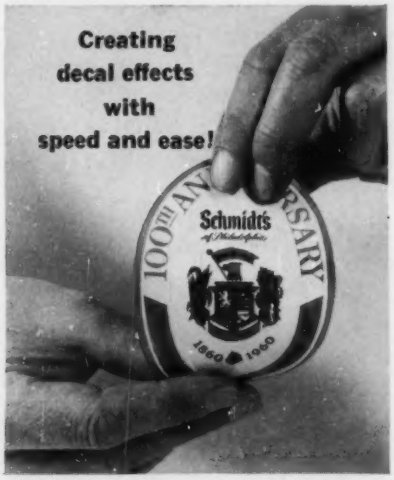
KOPPERS®

More effective labeling and tagging!

Time was when most labels and tags were considered routine printing jobs. Those days are gone forever . . . The growth of self-service consumer buying has made top management realize the importance of tags and labels as selling tools at the point-of-sale . . . and increased the responsibility of the men who buy them.

Today, tag and label buyers look beyond first cost to the job to be done. They look for tagging and labeling techniques that increase point-of-sale effectiveness, meet difficult specifications or reduce over-all costs.

Naturally, many of these value-minded buyers look first to Dennison . . . originator of more new labeling and tagging techniques than any other single source. A few examples of problem-solving teamwork between buyers and Dennison are briefly reviewed here.



Beer and safety razor blades have little in common. Yet, both have profited from a labeling technique that speeds and simplifies decoration.

Schmidt's of Philadelphia celebrated its 100th anniversary as a brewer in 1960 . . . with a Dennison split-top pressure-sensitive label playing a major role. Printed in three colors on transparent acetate and gummed with permanent Dennison PRES-a-ply® adhesive, it simulated a decal in appearance and clinging power. But, how different in application ease. No soaking in water. No sliding into position. Just a zip of its paper backing . . . a pat of the fingers . . . and there it was on an automobile or truck window. All of Schmidt's employees and distributors participated.

Gillette used the same labeling technique to redecorate thousands of counter cases when the Super Blue Blade hit the market with history-making impact in 1960. This Dennison PRES-a-ply label was printed in red, white and blue on transparent acetate to match the "price" spots already silk-screened on the glass cover of Gillette's full-line display case. Neatly and securely applied in seconds by finger-tip pressure, it saved time and bother for Gillette salesmen as they made their pre-promotion rounds.

Other users of this PRES-a-ply labeling technique find it the quickest, easiest way to add new prices, premium offers and other promotional or variable information to existing packages or displays. High-speed Dennison PRES-a-ply label dispensers keep application costs amazingly low.

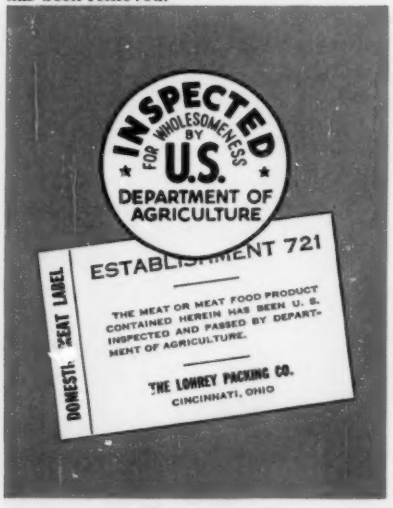
Giving "Easy on" labels extra "Stay on" power!

Few users of labels must meet such demanding specifications as meat processors. For, the US Department of Agriculture, a strict task master, insists on meat products being permanently labeled according to its regulations for consumer protection.

Cryovac film packaging of poultry, for example, calls for the application of a USDA inspection label after the film has been shrunk tightly around the bird in boiling water. The labeled package is then subjected to hours in a deep freeze. Yet, the label must remain 100% tamper-proof. For a Tennessee processor, Dennison supplied a pressure-sensitive label with such permanent adhesion that it cannot be removed without detection. To the customer's delight, the USDA inspector gave his complete approval not only for use on Cryovac film but also on waxed paper overwraps and waxed board boxes.

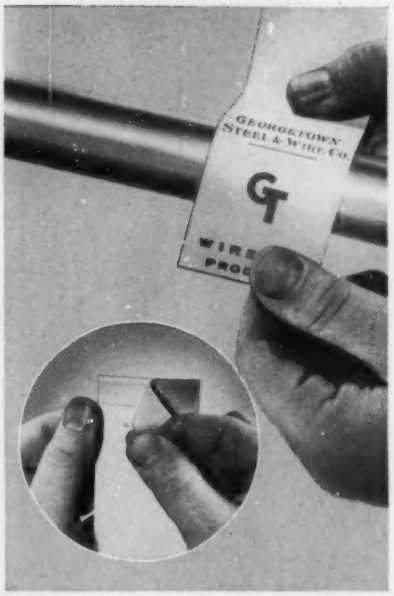
This same Dennison PRES-a-ply labeling technique is also bringing The Lohrey Packing Co. of Cincinnati and other federally inspected meat packers the benefits of strong adhesion. USDA regulations specify the labeling of stainless steel trucks and containers for meat and meat products. Each time a truck or container is emptied, it must be thoroughly steam-cleaned before re-use. Previous labels washed off after each use and often clogged drains, causing costly plumbing bills.

Dennison solved the problem by supplying PRES-a-ply labels with *an adhesive so strong that even steam cleaning could not take it off!* Printed on water-proof stock with grease-proof ink and over-varnished, these labels survive *40 washings!* The Lohrey Packing Co. no longer has to worry about continually reordering and applying labels to their containers. A big headache has been removed.



If you need labels that will stay on through steam cleaning, freezing or any other harsh environment — you need permanent PRES-a-ply.

New stringless technique slashes tagging costs!



A stripe of self-sticking adhesive on the back of the tag is now replacing the traditional string or wire in many cases.

This new tagging technique not only reduces attaching costs but also brings the benefits of tagging to products formerly considered impossible, impractical or difficult to tag.

With the self-sticking stripe on one end, as on the back of the Georgetown Steel & Wire Co. tag, you have a new wrap-around technique. It is now increasing the point-of-purchase appeal of such widely varied products as tools, home appliances, luggage and furniture. Other users apply these tags directly to doors, windows, lumber, trunks, tires, windshields and toys.

In-plant applications of this new technique employ couponed system tags for production, piece-work and inventory control.

NEW FACT FOLDER!

If you're responsible for getting more sales impact per dollar out of tags and labels or reducing over-all labeling and tagging costs, this free fact folder will prove invaluable to you. It describes techniques and shows samples that are now increasing sales and profits for some of America's most successful marketers. For your free copy, write directly to Dennison Mfg. Co., Dept. X227

Dennison

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FRAMINGHAM, MASSACHUSETTS

PACKAGING
STARTERS *and / or* STOPPERS

MARATHON HAS THE ANSWER

Research at Marathon means your product gets to customers exactly as it leaves your plant. Four different research groups make sure of it.

One group works only with *basic materials*, to produce better paper and paperboard. Another works exclusively with *packaging machinery*. A third tests for *package protection*. A fourth converts *ideas* into packages.

Starting thousands of babies on new baby foods called for a complex, five-product, sampling promotion. *The answer to the problem:* package each product in an individual serving pouch of polyethylene coated Hi-Fi* paper. Five separate designs, executed in five colors, are printed on a single rotogravure press run, by ingenious utilization of press capacity.

Stopping the penetrating odor of moth flakes was a packaging problem until a Marathon foil fiberseal overwrap provided the answer. Result: the manufacturer added product distribution in food and drug outlets.

General Packaging Department, Marathon, A Division of American Can Company, Menasha, Wisconsin. In Canada: Marathon Packages Ltd., Toronto 3.

*Registered trade-mark

For packaging...and ideas...

you can't beat marathon

Oneida puts "Magnetism" in flexible packaging!

Give your packaging that special power of attraction that spells the difference between just average and *fast* turnover. Oneida has had over 30 years of experience in designing dynamic pull into flexible packaging. It takes the right combination of know-how, materials, and superb printing. Oneida's 6-color printing facilities include oil ink letterpress, flexographic and rotogravure processes. We'd appreciate the opportunity of demonstrating how we could put magnetism into your packaging . . . and of serving you from our four strategic plants across the country.

whatever your product...

flexible packaging by Oneida

will surround it with SELL!

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CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment, Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

Reynolon® PVC film

clearly best for multi-packing biscuits (and a host of other products)

Increased sales volume, simplified in-store handling and price marking, faster check-outs—these are major well known multi-packing advantages, and here's how Reynolon helps you make the most of them.

Reynolon PVC film is crystal clear to bring out all the color and quality of your packages. Its *low cost* can save as much as 50% over other types of multi-packing materials. Reynolon is heat shrinkable—provides a skin-tight overwrap, immobilizing the product in transit and on the shelf, while protecting it against dirt, soilage and moisture.

Other plusses you receive with Reynolon plastic film are high tensile tear and impact strength plus a high degree of "wear resistance." Reynolon offers low temperature flexibility and long shelf life. It is readily and quickly heat sealable and has an excellent printing surface.

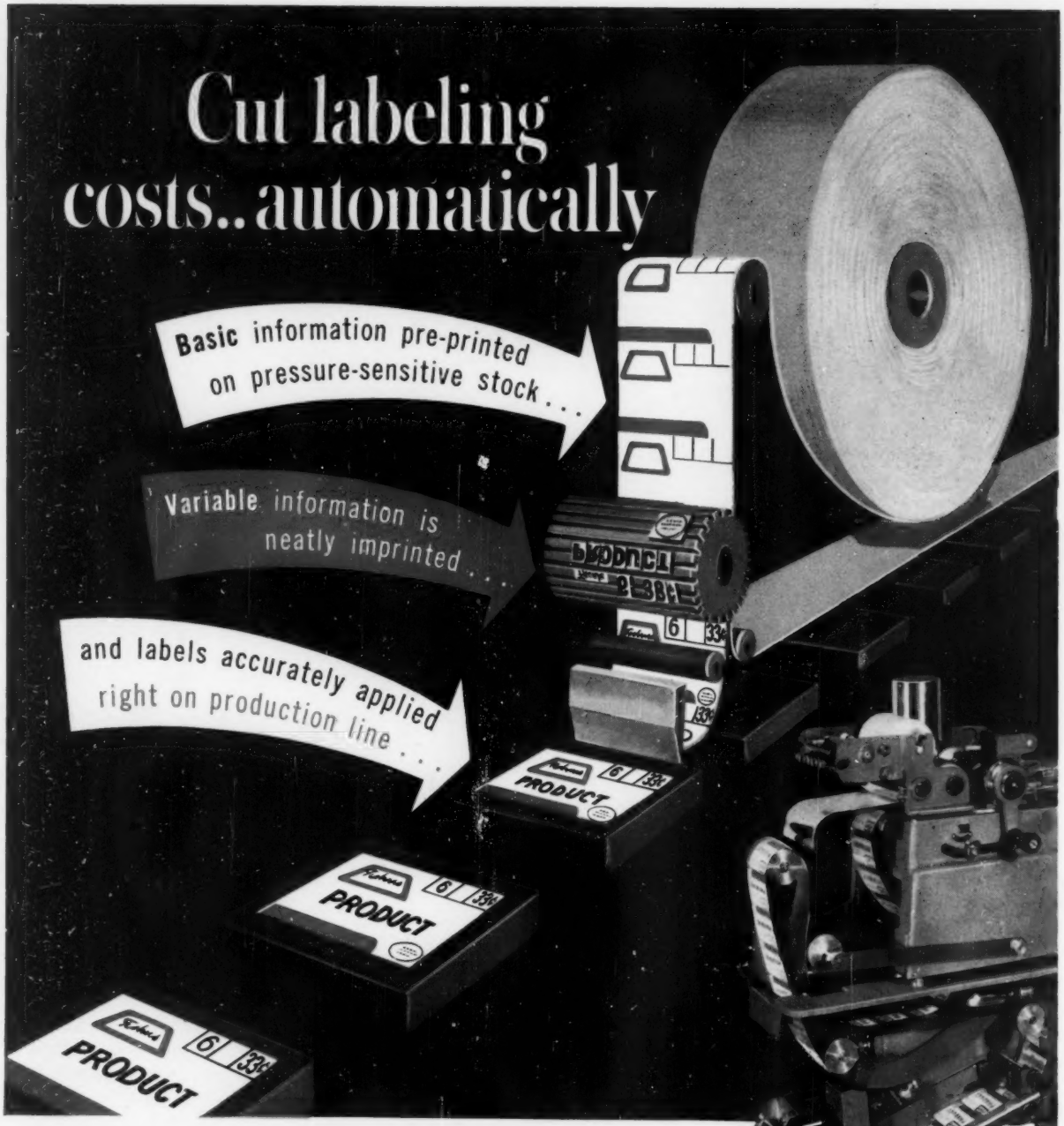
For multi-packing or for single unit packaging of produce, record albums, soft goods, paper products and others, Reynolon can add economical sales appeal and protection. For details, technical assistance and equipment requirements on Reynolon films, contact your nearest Reynolds office. Or write *Reynolon Plastics*, Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Va.

Watch Reynolds exciting TV programs on NBC: the Dick Powell Reynolds Aluminum Show every other Tuesday; Say When weekdays; and All Star Golf—in living color—every Saturday.

REYNOLON
PLASTIC PRODUCTS

REYNOLDS METALS COMPANY

Cut labeling costs.. automatically


Basic information pre-printed on pressure-sensitive stock . . .
Variable information is neatly imprinted . . .
and labels accurately applied right on production line . . .
PRODUCT
6
33¢

Monarch's Compact SENSOMATIC Adapts to Any Type Product

New Sensomatic imprints and applies up to 180 labels a minute, right on your production line. Gives you labels of uniform fine quality—at a saving! No need for large label inventories, no label obsolescence, no printing delays. And no delivery problems!

LOW COST LEASE PLAN AVAILABLE. Call in a Monarch Industrial Salesman to discuss the right answer to *your* label situation. He's backed by Monarch's 70 years of experience. Monarch's label design department is at your service.

Why not write or phone today, at no obligation, of course!

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- **NATIONAL NETWORK OF LICENSEES**
- **MACHINERY INTERESTS TO INPAK**

The following companies use stretchable packaging in products as indicated

Bristol-Myers Company
Ban—Trushay—Vitalis

Cable Electric Company
Night-Light

Chesebrough-Ponds Company
Cutex Nail Polish—Polyderm—Angel Touch Make-Up & Date Case—Moisture Creme—Lip Ice—Cutex Nail Flex—Tact

Colgate-Palmolive Company
Halo Shampoo—Veto Deodorant

Food Fair Company
Vitamins

Hubley Toy Company
21 Different Toys

Hudson Vitamin Company
Vitamins

Johns-Manville Company
Tile Scriber

Kedrin Pharmaceuticals, Inc.
Kedrin Tablets

Lanolin Plus, Inc.
Color Plus Nail Polish—Complexion Control

Lehn & Fink
Tussy Deodorant

Marrud, Inc.
Norwall Pipes

McKesson & Robbins
Vitamins (Bexel & Bexelettes)

Miles Laboratories
'One-A-Day' and Chocks Vitamins

Myzon, Inc.
Myzon (Veterinarian Product)

Pillsbury Company
Sweet-10

R. C. A.
Antenna

Revlon
Living Curl

Romanoff Caviar Company
Caviar

Singer Sewing Machine Co.
Trim-Handy (Cutting Machine)

E. R. Squibb
'Vigran' Vitamins
Orahesive (Denture Powder)
Sweeta (Concentrated Sweetener)

Sterling Drug, Inc.
Midol Tablets

Swingline, Inc.
Stapling Gun

INPAK SYSTEMS, INC. 441 Lexington Ave. New York 17, N. Y.

NEW YORK, N. Y.

Stretchable packaging stretches across the nation . . .

William B. Crane Co., originators of the stretchable packaging concept has announced the completion of a national network of licensees with the licensing of Southern California Carton Company. This new packaging concept is now available from coast to coast and in Canada, from the following materials suppliers:

DOWNINGTOWN PAPER COMPANY • FEDERAL PAPER BOARD COMPANY, INC. • THE NEVINS COMPANY • SOUTHERN CALIFORNIA CARTON COMPANY • AND IN CANADA,COLLETT-SPROULE BOXES, LTD.

Additional licensees will be announced.

Machinery for stretchable packaging is available from all the licensees. In addition, Inpak Systems, Inc., 441 Lexington Avenue, New York, has been designated by the William B. Crane Co., as their choice for the mechanical developments and leasing of stretchable packaging machinery. Mr. Crane assigned his patent application on stretchable packaging machinery to Inpak. Mr. Crane is Senior Vice President of Inpak Systems, Inc., as well as President of his own company.

Key To Its Growth

Three years ago, the William B. Crane Co., and its original licensees Downingtown Paper Company and the Nevins Company introduced the stretchable packaging concept. The basic concept was that the product and the package are one. The validity of the concept has been proven by the adaptability of stretchable packaging to a great number of varied products as shown in the left column.

Actually, stretchable packaging makes a plastic bottle inside a card rim, the product becomes the mold, combining the visibility of clear plastics with the protection of paperboard, making for a package that:

—economically uses materials
—protectively encases the product in plastics
—visually enhances the production display

The result is a tamper-proof merchandising package which hangs or stands and gives a sense of added value to the product.

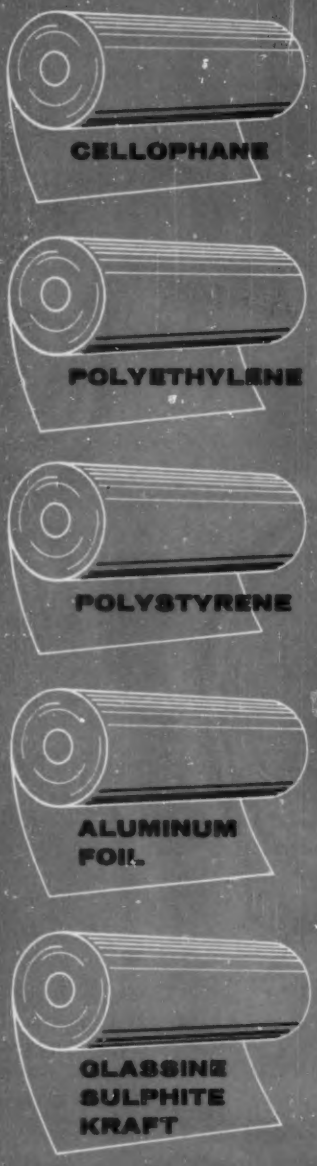
A Word Of Appreciation From Originator

"To all who helped make our packaging concept become a packaging category, our appreciation and pledge of continued development."

WILLIAM B. CRANE COMPANY
141 East 44th Street
YUkon 6-4790

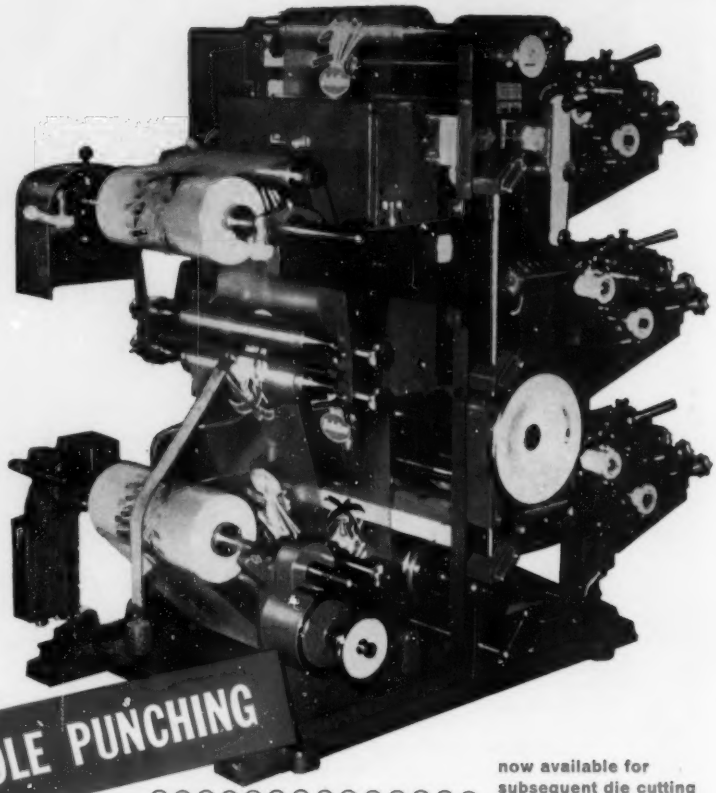
THE HEINRICH LILLIPUT

The LILLIPUT Prints



For Converting Into

- SUGAR POUCHES
- CUP COVERS
- POLY BAGS
- BAGS & BOX TOPS
- CELLO BAGS
- AND NUMEROUS OTHER PRODUCTS



HOLE PUNCHING

now available for subsequent die cutting of printed web in close register.

A HIGHLY VERSATILE FLEXOGRAPHIC PRINTER FOR NARROW WIDTH MATERIALS

NEW! Available for 16″ and 20″ maximum printing widths

NEW! Web extension for increased drying distances

NEW! Available with two-station friction rewinder and two-station unwinder

NEW! Can be equipped with rotary or razor blade slitter

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which of these extrusion coated and laminated materials are of interest to you?

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4. Saran/Cello/Poly
5. Cello/Poly/Foil/Poly
6. Paper/Poly/Foil/Poly
7. Paper/Poly/Paper
8. Paper/Foil/Poly—adhesive mounted
9. Foil/Poly/Paper adhesive mounted
10. Foil/Poly/Paper/Poly
11. Cello/Poly/Cello
12. Acetate/Poly
13. Kraft/Poly
14. Sulphite/Poly
15. Pouch Papers/Poly
16. Fabric/Poly
17. Burlap/Poly
18. Other constructions (describe below)

Solve your problems with

consistently trouble-free extrusion coatings and laminates

produced on America's most rigidly controlled equipment.

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Products Corporation

NEW HYDE PARK, NEW YORK

Telephone PRimrose 5-8000. Sales Offices in principal cities

DESIGNING of flexible packages. **PRINTING:** Glolux® Gravure, Process, Line & Tone Flexography on Cellophane, Polyethylene, Glassine, Extrusion Coatings, Laminations, Acetate, Pliofilm, Foil. **EXTRUSION COATINGS AND LAMINATIONS** on Cellophane, Foils, Mylars, Papers. **CONVERTING:** Rolls, Sheets, Bags, Pouches, Envelopes.

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Laminex Division
1401 Fourth Avenue, New Hyde Park, N. Y.

Gentlemen:

Please send me information and samples of the Laminates checked below.

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☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17

18. Other types_____

Name_____

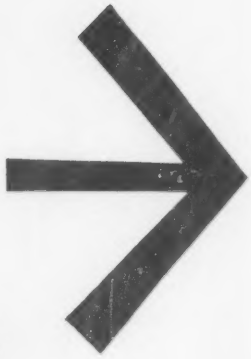
Address_____

City_____ Zone_____ State_____

Title_____ Department_____

Take your choice of stop-loss caps . . .

from ALCOA



Stop pilfering. Use Alcoa® Aluminum Pilferproofs. In one operation they're rolled around the bottle neck, hugging the bottle's threads and forming small bridges between the threaded portion and the lower locking band. Nobody gets at the contents without snapping those bridges, and ten times out of ten it's your customer who's first.

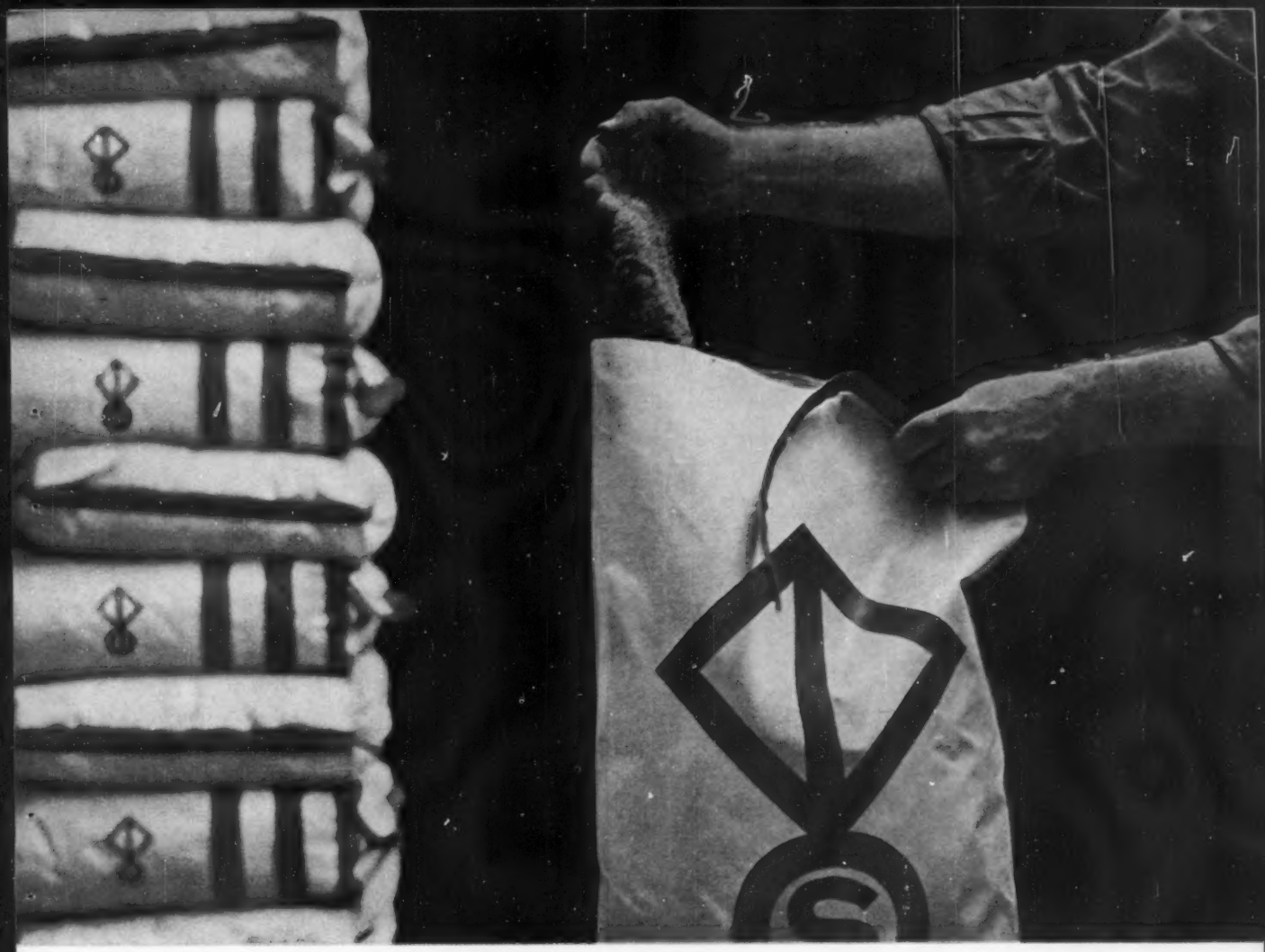
No more leakers. Use Alcoa's Hidden Thread Closure. It's prethreaded, but, unlike a molded cap, the Hidden Thread won't back off, crack, split, leak or lose its good looks.

And speaking of good looks, Alcoa Aluminum Closures come in any color you like. Also, they can be embossed, shaved, and highlighted for added beauty.

What stops loss? Alcoa Aluminum Closures . . . Over one-half billion times a year!

Entertainment at its Best . . . ALCOA PREMIERE
with Fred Astaire as Host . . . Tuesday Evenings, ABC-TV

BETTER PACKAGING



PROBLEM: How to specify moisture protection for your product without being an expert on packaging papers or coatings

SOLUTION: With International Paper's new "Levels of Protection" you buy precisely the packaging protection you need and no more

Now, with its "Levels of Protection," International Paper cuts through the confusion resulting from the many different types of moisture-barrier papers available today.

The "Levels of Protection" system provides the first effective yardstick for comparing one moisture-barrier paper with another. This means you don't have to be an expert on papers, coatings and weights to get the best packaging for your money.

This new rating system evaluates all our moisture-barrier papers—regardless of type or weight of coating—against a scientifically graduated scale of *levels of protection*. Knowing what product you package, we can quickly recommend the most effective level of protection for that product.

But this rating system has another dimension. Since we can supply a number of different types of moisture-barriers for any given level of protection, we can offer you the *one* barrier that *most economically* furnishes the level of protection you require for your product.

This new system is another example of the complete packaging service offered you by International Paper. Service which includes a complete range of paper packaging and paper packaging materials, skilled packaging engineers, printing and design service.

For full details, call any of our sales offices or write us direct.

INTERNATIONAL PAPER
NEW YORK 17, N. Y.

Manufacturers of papers for magazines, books, newspapers • papers for home and office use • converting papers • papers and paperboards for packaging • labels • folding cartons • milk containers • shipping containers • multiwall bags • grocery and specialty bags and sacks • pulps for industry • lumber, plywood and other building materials

Solve Multi-Point Temperature Control Problems...

at ⅔ cost of competitive systems

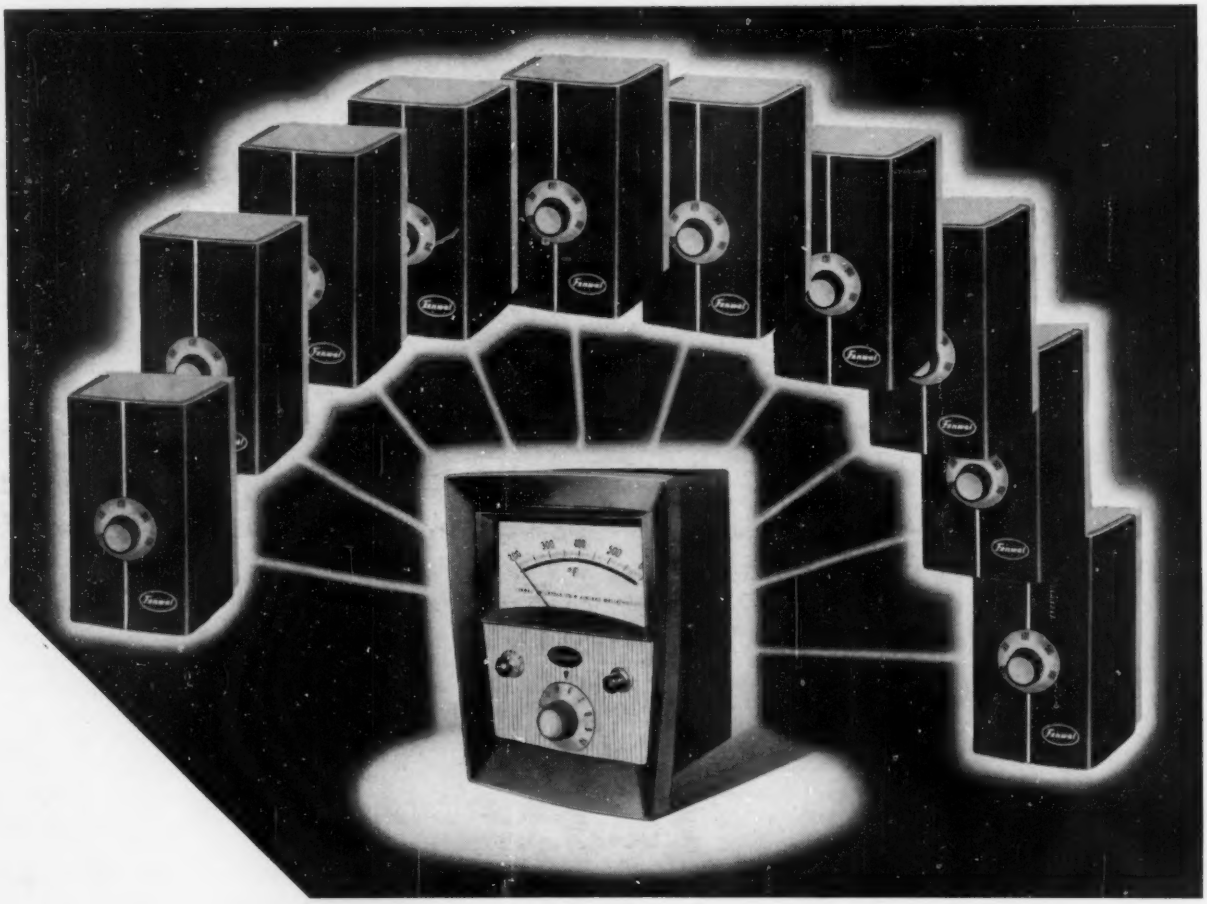
You get them all — wide ranging versatility . . . maximum sensitivity . . . easy installation and servicing! These features *combine* in a Fenwal 536-580 multi-point monitoring system to give you precise, transistorized temperature control and indication. And *you choose the features you need to suit your own requirements!*

Examine these cost saving advantages: Indication and control circuits are separate . . . the 536-580 system eliminates the need for separate indication and control at each point. You can build a control system concurrent with your needs — start with 2 points and build up to 10 points without paying a premium at the outset. The complete control system is built from *standard* catalog parts, thereby eliminating the need to buy costly "specials" for servicing at a later date.

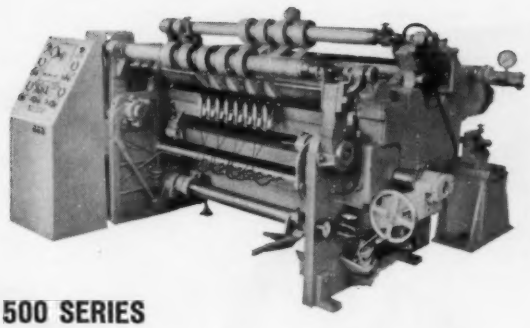
Individual points can have either proportioning or ON/OFF control modes. The system permits "flick of switch" indication of from 2 to 10 temperatures. Individual set points can be adjusted from a central control panel or through a separate potentiometer remotely located. You select your own number of points and you *pay only for the options you use.*

Choose from five standard temperature ranges — from −50 to 600°F . . . expanded scales permit fine temperature adjustments and improved readability, and *the entire system gives you sensitivity to within 0.1°F.*

Both instruments are smartly styled to perfectly complement modern industrial machines and interiors. A Fenwal engineer will be glad to supply information on this system, or any other temperature control in Fenwal's broad line. Write Fenwal Incorporated, 610 Pleasant Street, Ashland, Mass.

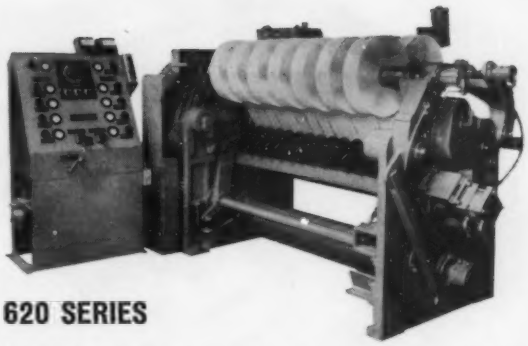


Another example of how **Fenwal** CONTROLS TEMPERATURE . . . PRECISELY



500 SERIES

A standard, multipurpose duplex slitter-rewinder for papers, films, foils, fabrics and other web materials. Speeds to 2000 fpm. Trim widths to 62″. Rewind diameter to 20″ maximum. Combination surface-center rewind using the differential driving principle. Rolls alternately wound on separate shafts. Score, shear, or razor cut, single or in combination. Also, Sealcut® electrically heated slitters.



620 SERIES

A heavy-duty duplex slitter-rewinder for papers, films, foils, laminates and other off-caliper materials. Speeds to 1000 fpm. Trim widths 32″ to 72″. Rewind diameter to 20″ maximum. Combination surface-center rewind using the differential driving principle. Rolls alternately wound on separate shafts. Score, shear or razor cut. Can also use Sealcut® electrically heated slitter elements.

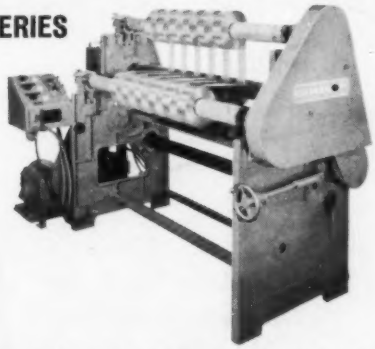
Cut web-fed production costs with the superb running qualities of The New Roll

Almost any finished roll of paper, film or foil, plain or printed, can look good on the outside. But, when a roll has been made with extreme care to assure fine, dependable *running* quality we call it The New Roll. The test is not how nice a roll may look, but how well it *performs*. Does it give you a long, low-cost, trouble-free run in high speed printing and converting? Does it keep your material fresh and *alive*, for better end results, or is it stretched out *dead* in the roll?

Superb *running* quality can be produced efficiently and economically *only on a truly integrated roll production system* designed to maintain optimum roll control all the way from unwind to rewind, with all controls adjustable and adaptable to the characteristics of the material to be handled, the quality of the parent rolls, and the intended service of the finished rolls. The truly integrated roll production system, we think, is a job for specialists only.

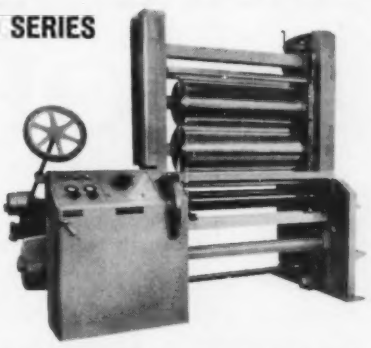
CAMERON
a team of specialists

550 SERIES



A light versatile, low-cost slitter-rewinder for films, foils, papers and other materials. Speeds to 500 fpm. Trim widths 32″, 42″, 52″ or 62″. Rewind diameters to 15″ maximum. Center winding using the differential driving principle. Rolls alternately wound on separate shafts. Choice of razor, score or shear-cut slitting. Integrated unwind with air operated brake and manual side shift control. Optional built-in pneumatic edge guide.

400 SERIES

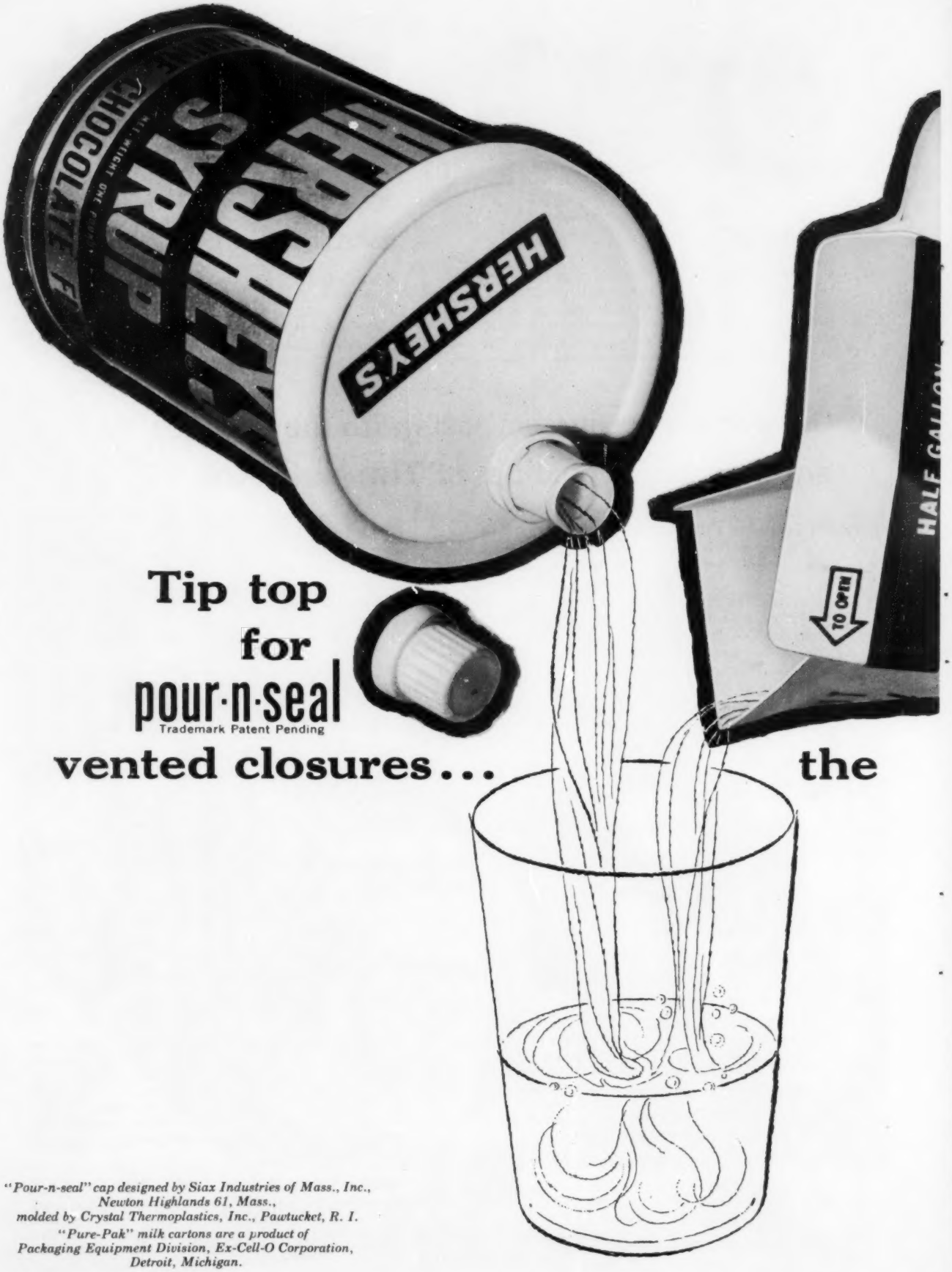


AA-394

A versatile, highly productive two-drum slitter-rewinder shown here in use as a foil separator for handling lightweight 2-ply foil, with each ply winding on a separate shaft, each rewound roll 15″ maximum diameter. The 400 Series is adaptable to a wide variety of other materials. Speeds to 1000 fpm. Trim widths 32″, 42″, 52″ and 62″. Rewind diameter (single roll) 30″ maximum. Two-drum surface winding. Choice of pneumatic score-cut or shear-cut.

For a quick review of the most comprehensive line of roll production equipment in the industry, write for new Cameron Bulletin **6010**

Cameron Machine Company, Franklin Road, Dover, N. J.
Canada: Cameron Machine Co. of Canada, Ltd., 14 Strachan Ave., Toronto, Ont.
France: Cameron Europe S/A, 5 Rue de Prony, Paris (17e) France
Brazil: Cameron Maquinas Ltda., Rua 24 de Maio, 104-5°, Sao Paulo, Brasil
famous TIDLAND pneumatic shafts are sold exclusively through Cameron



Tip top for pour-n-seal

Trademark Patent Pending

vented closures... the

"Pour-n-seal" cap designed by Siax Industries of Mass., Inc., Newton Highlands 61, Mass., molded by Crystal Thermoplastics, Inc., Pawtucket, R. I.

"Pure-Pak" milk cartons are a product of Packaging Equipment Division, Ex-Cell-O Corporation, Detroit, Michigan.

cream of coatings for milk cartons

ALATHON®

the polyethylene resins that bring new versatility to packaging

A natural combination—chocolate syrup and milk! And a natural choice—an ALATHON resin for a molded, reusable "Pour-n-seal" closure-dispenser that eliminates dripping and surging . . . a coating of ALATHON for a wax-free, leakproof milk carton.

Why? Well, name the properties you want in polyethylene, and you'll find them in one of the ALATHON resins tailored for packaging uses. For molding applications—easy moldability, freedom from warping, proper stiffness, resistance to stress cracking, faithful reproduction of mold detail, fast cycles. For coating applications — permanent adhesion to substrate, strong heat seal, low neck-in, fast coating rates.

Whatever *your* packaging need, you can be sure of a resin designed for your particular application when you include an ALATHON polyethylene resin in your package planning. Your supplier can help you select the particular formulation of ALATHON that will best do the job for you. Or write to: Du Pont Company, Dept. **MPA-10,** Room 2507A, Nemours Bldg., Wilmington 98, Del. *In Canada:* Du Pont of Canada Ltd., P.O. Box 660, Montreal, Quebec.

POLYOLEFINS DIVISION
POLYCHEMICALS DEPARTMENT

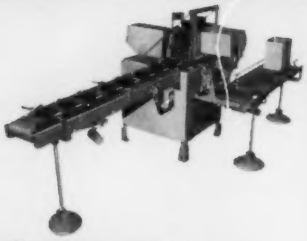
DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

You'll get the Most in economical, automatic, high-speed operation

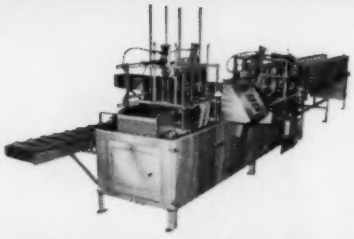
...with fmc

Can and Package Casers



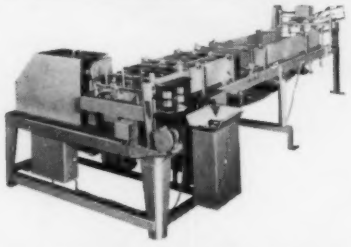
"SURE-WAY" PACKAGE CASER

Designed to convey, position, assemble and load packages into shipping cases in a continuous, high-speed automatic operation. Available in 11 different models for filling top-open, side-open and end-open shipping cases. Extremely flexible—handles a wide range of products and packages.



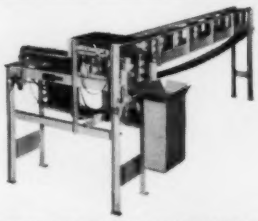
"SURE-WAY" FULLY-INTEGRATED CASING LINE

Composed of three completely synchronized automatic units: the "Sure-Way" Case Set-Up Machine, Package Caser and Case Sealer. Offers the ultimate in speed, efficiency and savings in operator manhours. Many other special accessories make this the most flexible unit in the field.



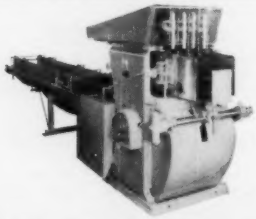
FMC NON-SHOCK END-OPEN CASER, MODEL 20

Specially designed to load single tier can patterns into economical end-open shipping cases. Permits fibre savings up to 15%. Loads up to 1200 cases an hour. Ideal for 46 oz., #10 and #12 cans.



FMC NON-SHOCK END-OPEN CASER, MODEL 10

An extremely well-constructed low priced machine, specially designed for single tier loading of cans into end-open shipping cases at relatively low or medium rates of production. Loads 10 cases a minute on #12 and #10 cans; 7 to 9 cases on 46 oz. and 307 diameter sizes. Has all the important "Non-Shock" features.



FMC NON-SHOCK TOP-OPEN CASER, MODEL 3

For continuous, high-speed lines loading single or multiple tiers into top open shipping cases. Empty case is placed over loading chute; balance of cycle is completely automatic at speeds up to 1200 cases per hour. Handles can sizes from 202x308 packed 6x8, to 603x700 packed 2x3.

FMC is one of the world's leading manufacturers of casing equipment. Illustrated here are but a few of the complete FMC lines, including the famous "Sure-Way" line of package casers and associated equipment, which is distributed exclusively by FMC. If your product is packaged in a can, box, carton, or other rigid or semi-rigid container, or if the product itself takes a rigid shape, chances are you can case it better for less with FMC precision-engineered equipment. Let your FMC representative work with you in the best solution to your specific casing problem.

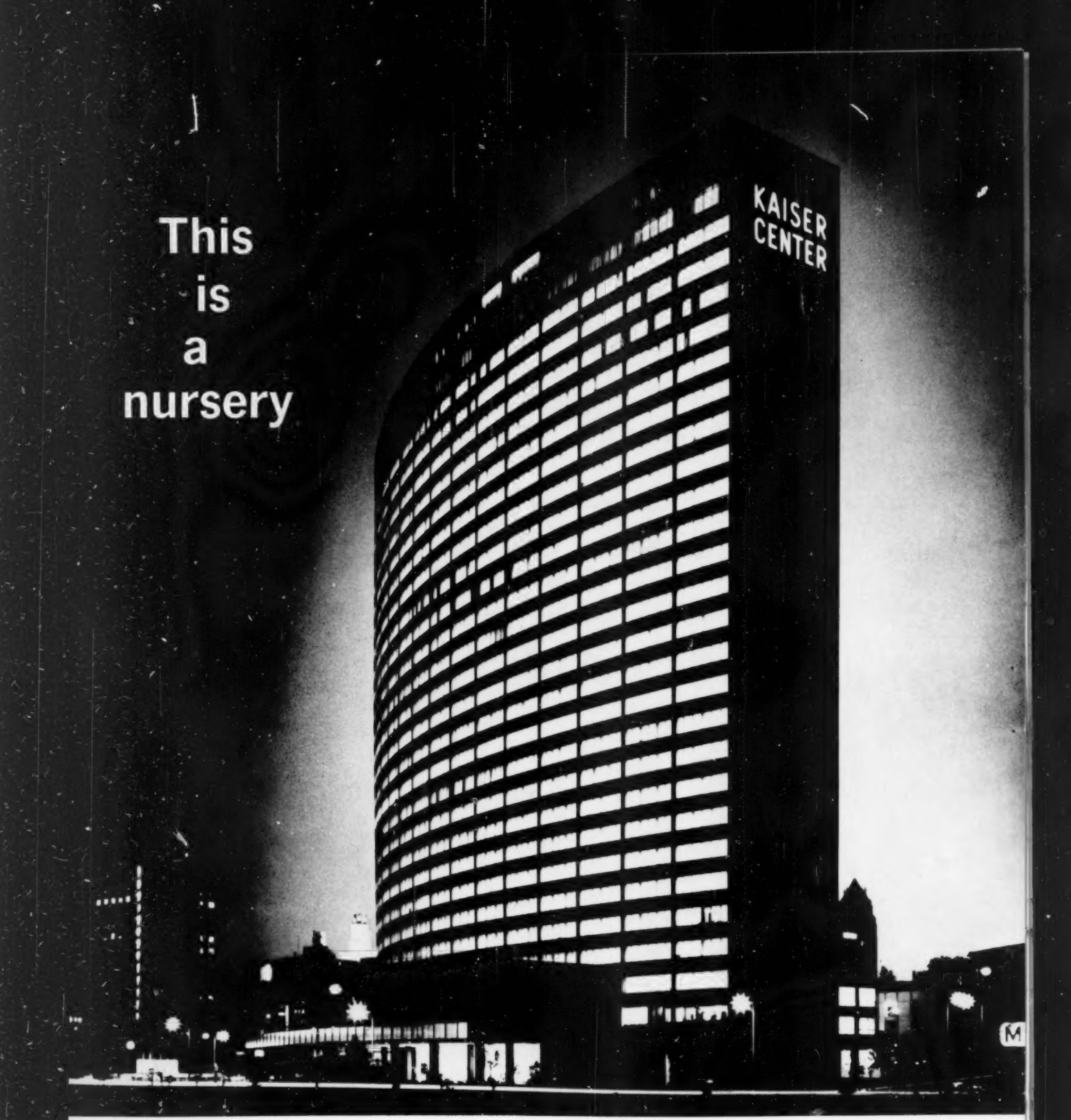
SEE US AT THE PMMI SHOW BOOTHS 624-626

fmc CORPORATION

FMC CORPORATION

CANNING MACHINERY DIVISION

GENERAL SALES OFFICES: WESTERN—SAN JOSE, CALIF. · EASTERN—HOOPESTON, ILL.



This is a nursery where new packaging ideas are born. This is Kaiser Center, International Headquarters for Kaiser Industries in Oakland, California.

For the Competitive Edge in packaging call on A-C-T, Kaiser's Aluminum Consulting Team. Write: Kaiser Aluminum, A-C-T Packaging, 850A Kaiser Center, Oakland 12, California.

KAISER ALUMINUM

New Leadership in the World of Aluminum

PACKAGE DEVELOPMENT • PACKAGE DESIGN • PROCESS DEVELOPMENT • PACKAGE EQUIPMENT CONSULTATION
FUNCTIONAL PACKAGING RESEARCH • FOOD TECHNOLOGY RESEARCH

See *Follow The Sun* and *Maverick* weekly on the ABC-TV Network

Modern Doughboy UNIPAX

PACKAGES BEAUTIFULLY. Unipax packages practically any product—soft goods, hard goods, foods, magazines and catalogs in polyethylene and in shrinkable films. Handles items up to 16″ x 16″. The packages are snug, trim and neat with high-eye appeal and saleability.

PACKAGES ECONOMICALLY. Unipax saves in two ways. All operations are controlled by one operator. Utilizing center fold film, a snugging device permits sealing close to the package contents. A minimum of film is required.

PACKAGES SWIFTLY. Fast, smooth packaging saves operating time. Unipax production, depending on items packaged, will complete up to 40 cycles per minute. Unipax usually seals top and bottom. It will seal third side as well, when complete closure is required.

PACKAGES DEPENDABLY. Unipax operation is entirely mechanical with no solenoids or air valves. Sealing is accomplished by hot-knife cut off. The entire operation of Unipax is simple and completely dependable.

This is the Unipax in action. When sending your inquiry, we suggest sending product samples for test packaging.

MECHANICAL DIVISION
DOUGHBOY INDUSTRIES, INC.
226 W. 3rd St., New Richmond, Wisconsin

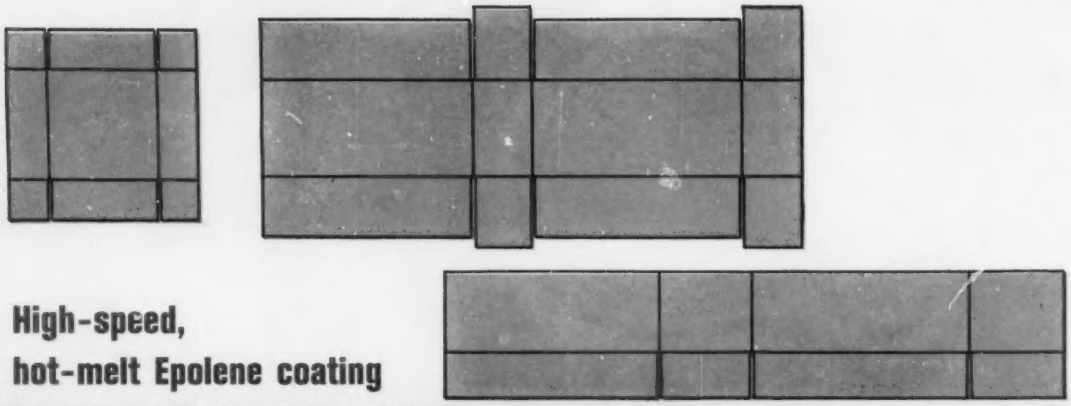
Gentlemen:

We shall appreciate receiving your Technical Bulletin on Unipax (Model CP). We are sending samples of items to be packaged. (Yes____ No____)

*Name*_____

*Address*_____

*City*_____ *State*_____



High-speed, hot-melt Epolene coating

EXTENDS USE OF CORRUGATED BOARD

The market for corrugated board, one of the most versatile of packaging materials, is being further extended within the container field. The reason: hot-melt Epolene coatings.

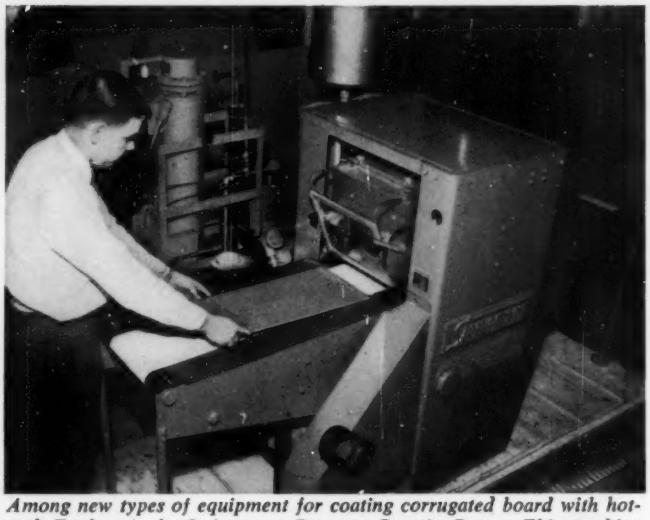
Specifically developed for use in high-speed pressure curtain coating machines, Epolene coatings provide an effective barrier against moisture and grease, and are highly resistant to abrasion. In addition, these clear, high-gloss coatings flow on smoothly and uniformly, giving a finished surface that is attractive as well as durable.

Net result for manufacturers, converters, and users of corrugated board is the extension of this versatile material into packaging areas heretofore restricted to specialty cartons, lined containers or impregnated fiber board. Such areas include—

- packaging used for displays and sales aids;
- packages for perishable goods, for products associated with grease and oils, and for products needing protection against the abrasive action of the corrugated board itself; and
- cartons that must hold up under adverse shipping and weather conditions.

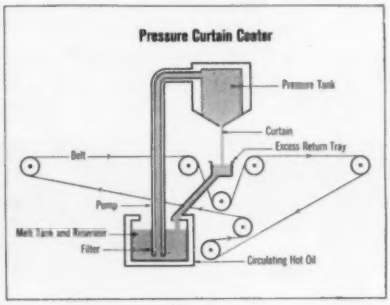
Hot-melt Epolene coatings can be economically applied at high speeds to almost any die-cut corrugated board. The coatings are tough and flexible, do not flake, and in addition can be heat-sealed by fast, electronic techniques.

The latest types of coating machines, including the Steinemann Pressure Curtain Coater, are operated at Eastman's Customer Service Laboratories to help converters and manufacturers improve their coating methods and products. Samples of your own corrugated board (up to 12 inches in width and 6 feet in length) may be sent in for coating with Epolene hot-melts, then returned for your evaluation. For details of this service, contact your local Eastman representative. EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.



Among new types of equipment for coating corrugated board with hot-melt Epolene is the Steinemann Pressure Curtain Coater. This machine efficiently coats web or die-cut corrugated paperboard at rates from 100 to 950 feet per minute, depositing a film from 1.0 mil to 15 mils thick. In the photograph, ⅛-inch corrugated board sections are being coated with Epolene hot-melt at 350° F.

The pressure curtain coater conveys corrugated web or cut stock through a curtain of molten Epolene. Coating material dropping through die-cut holes or around edges of stock is collected and reused. Since the corrugated board is die-cut before being coated, the broke can be salvaged. Thickness of the coating is regulated by adjusting the speed of the conveyor and the amount of coating material pumped to the head.



Epolene®

Eastman polyolefin resins for high-speed, hot-melt coatings

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta; Boston; Buffalo; Chicago; Cincinnati; Cleveland; Detroit; Greensboro, N. C.; Houston; Kansas City, Mo.; New York City; Philadelphia; St. Louis. **Western Sales Representative: Wilson & Geo. Meyer & Company,** San Francisco; Los Angeles; Salt Lake City; Seattle.

Riegel

Creative Climate for Tomorrow's Packaging

Gorgeous color . . . smooth, creamy, tempting color that suggests new taste sensations . . . is giving new impetus to ice cream sales. Riegel made it possible *at low cost* by being first with dramatic four-color wrap-around illustrations for *stock* cartons. This summer they boosted sales for many leading brands. New ideas now coming will keep this leadership for Riegel customers.

Imaginative packaging concepts like this are available to you too, custom tailored by Riegel's design staff for a wide variety of products . . . in cartons or flexible packages.

You will be interested in the new, broader range of Riegel materials and services shown on the following pages.

. . . the new ideas come from

Riegel

RIEGEL PAPER CORPORATION, 260 MADISON AVE., NEW YORK 16, N.Y.

Specialist in the packaging of foods, drugs, and soft goods

Flexible packaging . . . carton board . . . folding cartons . . . carton liners

New Brilliance...Added Protection for Kentucky Club Aromatic Mixture

New high-gloss plastic coating gives extra appeal to four-color gravure printing on Kentucky Club's plaid pouch. Now made with Riegel Pouchpak*, a coated/laminated paper that resists cracking in repeated foldings and refoldings and keeps tobacco fresher.

Making packaging ideas *work*... combining protection, eye-appeal and machine efficiency... this is Riegel's business. We've a flair for thinking of every product as something different... something special... and developing for it the one best packaging material, be it pouch paper, glassine, foil, film... or combination... printed, coated, or plain. Write for more information today... for the new ideas come from Riegel.

Flexible Packaging Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
Flexible packaging materials for foods, drugs, chemicals
**"Pouchpak" is Riegel's registered trademark for its coated/laminated paper*

Striking New Package Personality for McCrory's created and coordinated by Lassiter

To launch McCrory-McLellan-Green Stores' own line of infants-wear, Lassiter designed a strong-brand-identity group of polyethylene packages for the entire department, and coordinated production with all their suppliers.

Unified packaging to increase customer appreciation of store-wide quality is a design requirement that Lassiter has met many times. As the leading specialist in soft-goods packaging, we understand both sales and production problems. We know how to create packages that will catch the shopper's eye, promote sales . . . and minimize your production costs.

This kind of *practical* creative packaging can help you. May we lay the world of design at your feet? Write Lassiter today.

Lassiter Sales
RIEGEL PAPER CORP., 350 Fifth Ave., NYC 1
Designers and producers of film, foil, paper and paperboard packaging, inserts, riders, labels, bands and tags.

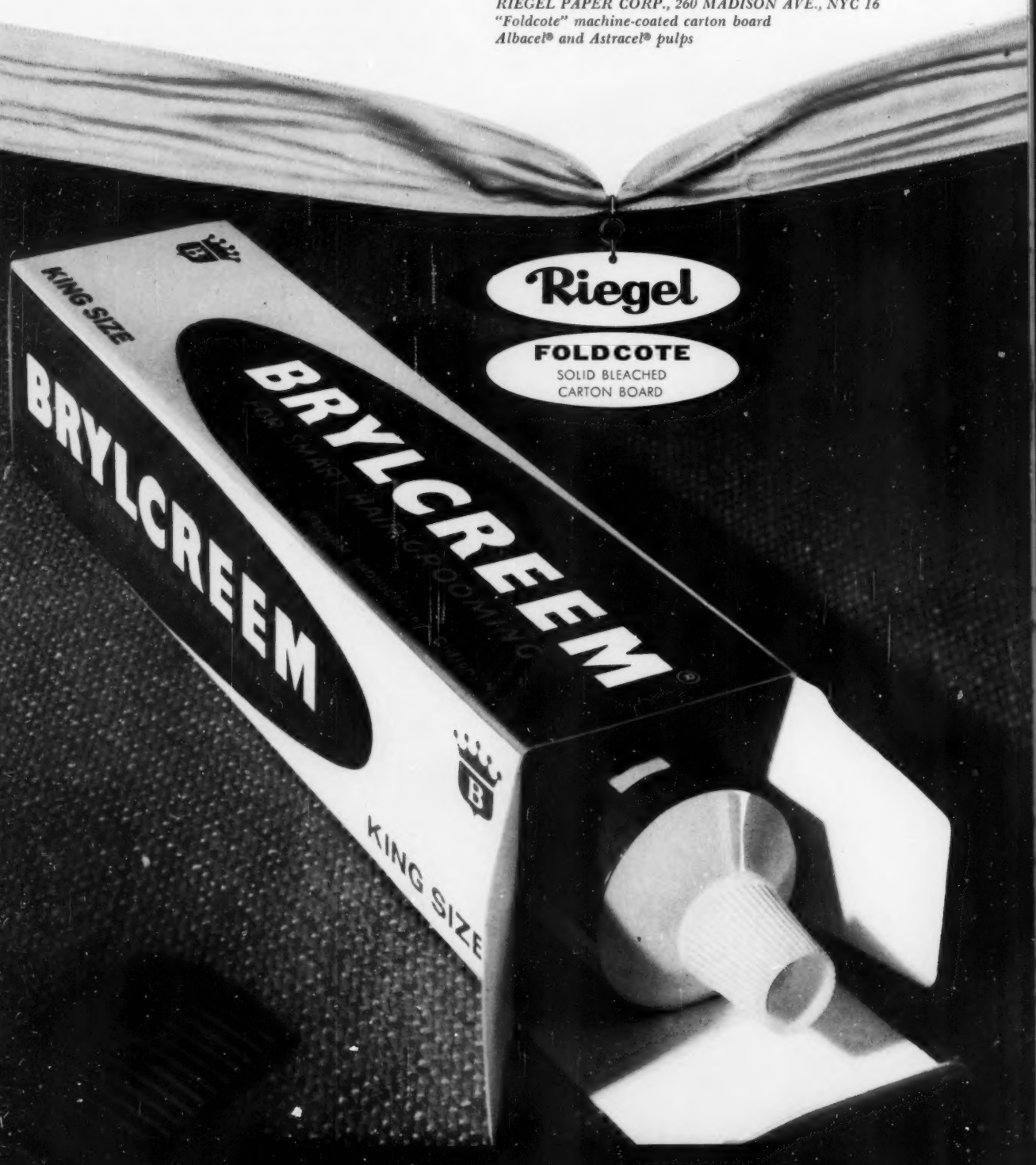
BRYLCREEM ...*another quality product that now uses Riegel Foldcote®*

Smart, smooth and neat . . . Brylcreem's eye-catching carton now uses Riegel "Foldcote" bleached board. It's stronger, stays crisp and clean despite constant shelf abuse and handling. Printed letterpress in two colors by The Nevins Co., Clifton, N. J.

For noticeably stronger, brighter cartons . . . and extra eye-appeal . . . try Riegel's outstanding new coated carton board . . . "Foldcote". Super-white for color brilliance, super-smooth for high fidelity reproduction, super-strong for rugged, rigid packages that keep that clean look.

Your future, too, can be brighter with "Foldcote". Ask for samples and information. Ask too, about other Riegel solid bleached boards. Export inquiries invited. Call Riegel today . . . for the new ideas come from Riegel.

Pulp and Paperboard Division
RIEGEL PAPER CORP., 260 MADISON AVE., NYC 16
"Foldcote" machine-coated carton board
Albacel® and Astracel® pulps



Borden's Starlac®... more good things now come in Riegel Cartons

Borden's new five-color "Starlac" carton... gravure-printed on Riegel Foldcote®... formed, filled, sealed on Bartelt machinery.

Reliability and follow-through... these are the reasons Borden placed this new Starlac carton project in Riegel's experienced hands. Our modern plants and equipment, plus personalized attention and on-time deliveries, assure all volume carton users that their demands will be met.

Riegel Folding Carton Division offers full choice of printing processes, coatings and finishes from strategically located plants... plus award-winning design services. You'll find a talk beneficial... for the new ideas come from Riegel.

Folding Carton Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
Folding Cartons of every description.
Counter display cartons. Egg cartons.

BARTELT

packaging machinery is on the job for...

Lipton®

Lipton Soups . . . family favorites, because of their savory home-cooked taste, the new mix way . . . go to market protected by packages of the highest standards . . . packages fabricated automatically by Bartelt Packaging Production Lines.

Bartelt has specialized in custom designed packaging machinery . . . and only packaging machinery, for more than a decade. There is no substitute for creative engineering . . . based on solid experience . . . when only the best is good enough.

BARTELT ENGINEERING CO., INC.
Subsidiary of Riegel Paper Corporation
1900 Harrison Ave. • Rockford, Illinois
New York • Chicago • San Francisco

Print-Pak bags another good idea

Industry knows a good idea when it sees one. And many of industries' good product ideas are being bagged in Nibroc Print-Pak. ■ Nibroc Print-Pak is ideal for industrial use . . . is economical . . . strong . . . adapts to automatic handling . . . fills easily and closes securely. ■ Nibroc Print-Pak prints clean, colors are brighter — printers like it — because it is easy to handle and prints so well. Write today for samples and complete information to Dept. MP-10. Bring your product and customer together with Nibroc Print-Pak.

Another Quality Product of

BROWN COMPANY

General Sales Offices: 150 Causeway Street, Boston 14, Mass. • Mills: Berlin and Gorham, New Hampshire

Nibroc® Print-Pak offers an attractive, practical packaging method for the Geigy Chemical Corporation of Ardsley, New York. Each of the bright, heat-sealed, plastic-lined Kard-O-Paks, produced by American Bag and Paper Corporation of Philadelphia, are color-coded for easy product selection.

Take your

sales UP with Aerosols!

...and take up aerosols with GENERAL CHEMICAL!

Can aerosols add the magic touch of increased sales to your products? General Chemical can help you find out.

Prospective aerosol marketers discover that General Chemical has all the latest technical and marketing information they need, ready and waiting.

For example, we can show you scores of promising aerosol formulations —some typical, some developed in our laboratories . . . all containing *safe* "Genetron" propellants. We have extensive, detailed data on a host of aerosol markets, which we'd like to share with you in a fact-filled *personalized presentation* at your office or plant.

We can also put you in touch with experienced contract fillers who can help make your move into aerosols easy, with no investment on your part in plant or personnel.

To take us up on our offer to help, write: "Genetron" Dept., General Chemical Division, Allied Chemical Corporation, 40 Rector Street, New York 6, N.Y.

genetron®
aerosol propellants
Putting the "push" in America's finest aerosols

Allied Chemical

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N.Y.

Look what's new in drug packaging

NEW TOUCH FOR AN ASPIRIN BOTTLE This striking bottle for Squibb not only looks different . . . it feels different, too. Besides looking clean and modern, the stippled area that sweeps down from the shoulder feels so different to the touch that it's easily identified, even in the dark. At the same time, it protects the label from scuffing. The large 28 mm. neck permits rapid filling on the production line. This Armstrong bottle is doing a job for Squibb. What can we do for you?

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

Background for Packaging

Notes, quotes and comments. An editorial feature

Consumer discontent over certain features of packaging—fanned by the widely publicized Senate hearings on deceptive packaging—is spreading into broader territory. Several consumer magazines and women's pages have recently carried roundups of consumer complaints on package *inconvenience* (chief complaint: difficulty of reclosing) and *McCall's* devoted a whole session to this subject at its fifth annual Congress on Better Living, just concluded in Chicago. Transcript of this session should be available soon from *McCall's* and ought to be studied by every packager of consumer products.

Surprising response by package and materials suppliers to the challenge posed by deceptive packaging ruckus. Although they are in no way liable for charges of deceptive packaging against their customers, several supplier organizations—including the National Paper Box Mfrs. Assn., the National Flexible Packaging Assn. and the Can Manufacturers Institute—are taking an active interest in the problem and various supplier companies have announced their readiness to advise customers.

Watch for announcement of a new type of low-cost, transparent, highly serviceable packaging film. New variations of high-density polyethylene resin can now produce a crystal-clear film in gauge as low as ½-mil and techniques have been worked out for applying a simple lacquer coating for heat-sealing purposes. With stiffness on the order of that of cellophane and with equal ease of machine handling and heat sealing, this may become the surprise packaging film of the year.

Tin industry doesn't know which way to turn in its effort to maintain consumption of tin in cans. Tinplate is by all odds the biggest U. S. consumer of tin, taking in 1961 almost six times as much as the next largest use, which is in solder. No sooner had the Maylayan Tin Bureau hailed the achievement of American steel companies in producing a "skinny" tinplate competitive pricewise with aluminum than two companies (U. S. Steel and Weirton) announced a further step reducing the weight of tin on this material by 60%, down to 0.1 lb. per base box. If this were universally applied to all tinplate, such a weight reduction could result in cutting tin-producers' annual sales by 1,700 long tons.

The aluminum threat, in the light of recent can-production figures, is still regarded by the steel industry as slight. Figures issued by the Can Mfrs. Institute for 1960 for the first time show the consumption of aluminum in cans. In 1960, according to this report, 20,314 tons of aluminum went into the making of cans; the consumption of steel was 4,818,164 tons. The aluminum figure includes areosol cans, which used 66,440 tons of steel.

Welded side seams on cans, eliminating soldering, can now be produced at a satisfactory commercial speed of 600 ft. per minute, on a continuous tube that is then cut off for can bodies. The only remaining problem, according to *Concan*, which is working on the process (see article p. 145, this issue), is to get cost down to a level equivalent to soldering. The research is part of a long-term program for the continuous printing, lacquer coating and forming of tinplate cans in a high-speed system which eventually should offer economies as well as a better-looking can.

Hazardous-substances labeling is going to be enforced effective Feb. 1, 1962, according to the latest word from Washington. F&DA believes that its new ruling (see p. 112, this issue) allowing the use of temporary expedients—such as stick-on labels and hang tags—[*Continued on page 44*]

15
Gillette
Super
Gillette
15
Super
BLUE BLADES
IN DISPENSER
Gillette
Super
15

super packaging for a super product with BRITE-PAK ENAMEL COAT

The Gillette Safety Razor Company knows that for most sales appeal you need bright, eye-catching packaging. That's why this package for Gillette Super Blue Blades is made of Brite-Pak Enamel Coat bleached board.

Snow-white on both sides and all the way through, Enamel Coat is made of 100% virgin pulp. It gives these packages a more sparkling, inviting look.

Naturally, Enamel Coat takes full-color process printing brilliantly, yet is remarkably economical. Users say it is the best machine coated bleached board on the market.

Brite-Pak Enamel Coat can upgrade your packaging—save you money as well. For more information, write to Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N.Y.

West Virginia Pulp and Paper

Continued from page 41

will accommodate hardship cases of companies which plead they cannot make a full change-over of permanent labeling by that time. The Chemical Specialty Mfrs. Assn. has petitioned for an amendment extending the compliance date another 12 months, but F&DA does not favor such an extension and will neither propose nor endorse it.

Food packagers are reminded, by some materials suppliers, to test proposed packages not only for strength and style, but for any possible effect of the packaging material on taste and odor of the product. Obvious as this point might seem, it is one most frequently overlooked. Clear plastic materials particularly seem to give packagers a false sense of security. F&DA clearance of a material under the Food Additives Law merely assures that it represents no hazard to health; this has nothing to do with taste and odor pick-up, which can have a disastrous effect on some delicate food products as well as on candies.

Ideas from the military, subject of an article in this issue (p. 130), have many ramifications in commercial packaging. *Example:* A lamination of polyester film, aluminum foil and vinyl, developed by Quartermaster Corps as a package for dehydrated rations, is now being tested by a major packaging supplier in flexible pouches which are so strong and heat resistant that they reportedly can be heat processed after filling with food contents in steam retorts in the same manner as cans.

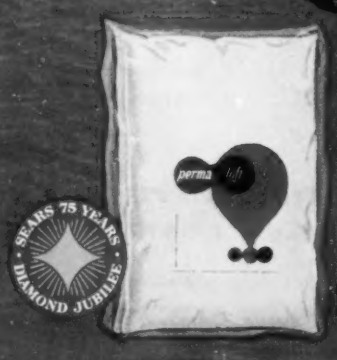
An indirect approach in the promotion of convenience foods is suggested by the Modern Foods Council, which finds that homemakers have a psychological resistance to overstressing of the word "convenience." Instead, the Council suggests, producers should promote: quality and enjoyment of the product; the saving of time for other housewifely pursuits, such as table settings; more time with the family by the elimination of dishwashing, etc.; the opportunity for greater variety in menus.

Look for growth of aerosol packaging of perfumes, as distinct from the more dilute colognes, where aerosols already have a strong position. According to year-by-year figures compiled by *Risdon Mfg. Co.*, sales volume of aerosol colognes rose 164% between 1955 and 1959, while non-aerosol colognes gained 4.5%. Now, with the popularity of new purse-size perfume aerosols with metered valves, the same thing may be happening in perfumes. In 1960 more than twice as many fragrance houses marketed spray perfumes as in 1958; only three major houses have so far resisted the trend.

Tamperproof closures are beginning to find markets in unexpected areas. Makers of liquid shortenings and salad oils, for example, find that complaints of rancid product can be traced to the habit of some women shoppers of opening a bottle to smell the contents. Just the momentary admission of air to the package, if it goes back on the shelf to stand awhile, is enough to start oxidation of these high-fat-content products. A tamperproof seal also protects against "cap switchers," who have been known to switch price-marked caps from small to large sizes of the same product.

Government crackdown on "money-back" advertising claims should be noted by those responsible for package copy. Federal Trade Commission is pushing this campaign, pointing out that claims such as "satisfaction or your money back" or "10-day free trial" must mean what they say, with no limitations or conditions on full refund unless such conditions are plainly stated. While the FTC is aiming primarily at ads, it also has the power to act against misleading representations on packages.

FASTER TURNOVER



Pillow by Sears
Package by Milprint

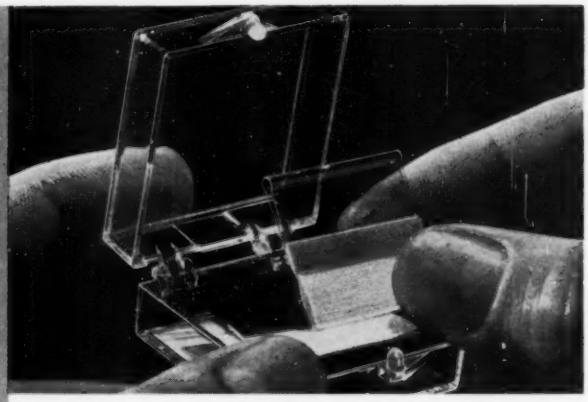
MILPRINT PACKAGING
GIVES YOUR PRODUCT
MARKETING POWER

Milprint Inc. General Offices, Milwaukee, Wisconsin
Sales offices and plants conveniently located across the nation

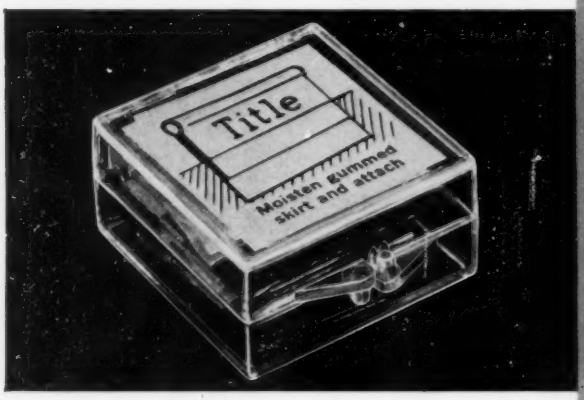
NEW CP PACKAGE BOOSTS SALES 34%

at no increase over previous packaging cost

Live wire display for AICO index tabs, designed and produced by CREATIVE PACKAGING INCORPORATED . . . "Has stimulated a 34% increase in sales, yet costs no more than previous AICO packaging," says Mr. Clarence W. Clemen, Vice President—Sales, G. J. Aigner Company.



Clear plastic, *re-usable* boxes are instant "pick-me-up" attraction. Display unit contains 48 plastic boxes, each containing assortment of colored index tabs and title inserts. The complete display takes up only 6″ x 9″ on dealer's shelf.



Printed insert with "how-to-use" instructions is clearly readable through bottom of plastic box. Box has patented, unbreakable hinge and snap closure; may be hot-stamped with customer's trade mark or message.

Sturdy, paperboard overpack gives ample shipping and handling protection. Scored, die-cut cover folds back and tucks in; makes its own colorful display card. Package is printed by CP in high-gloss, high visibility colors.

ONE CALL DOES IT ALL! CP will design and produce a best-selling package . . . complete with all components . . . for *your* product. A simple design . . . bright, compact, and loaded with "pick up" like the AICO package . . . is a proven sales stimulant for fishing accessories, electronic components, costume jewelry and a host of other small items. Call or write Dept. SM-101 for full information and free illustrated brochure of CP facilities and services.

CREATIVE PACKAGING, INCORPORATED

111 Monument Circle, Indianapolis 4, Indiana • Melrose 5-3577

DIVISIONS:

Diamond Plastics Industries, Roanoke • Paper Package Company, Indianapolis

MOLDED PLASTIC BOXES • FOLDING CARTONS • BLISTER PACKS • INSERTS • SET-UP PAPER BOXES

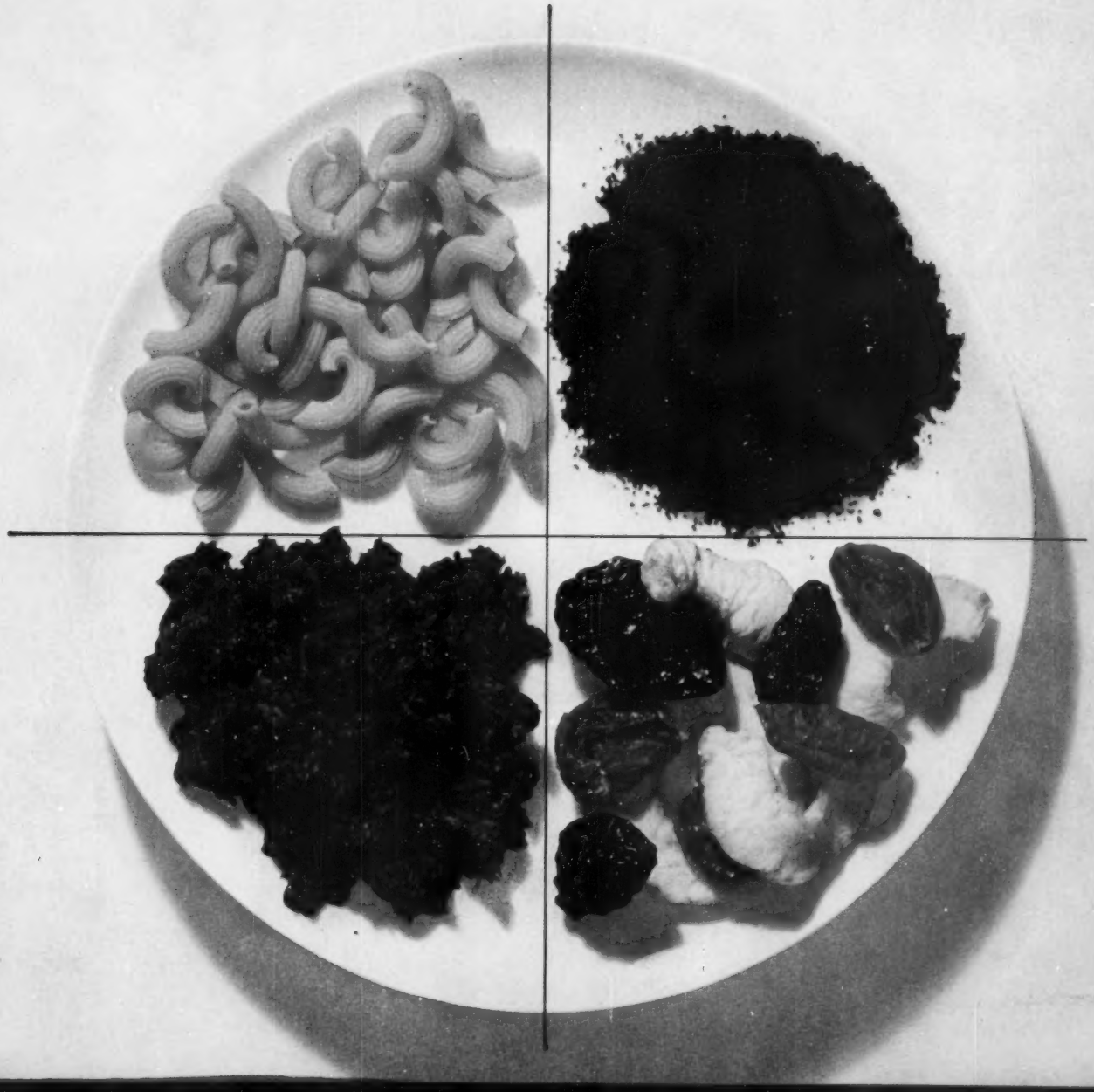
Whatever Product

you intend to pack, the Hamac-»Transwrap«® offers a rational and economical method in most cases. This automatic unit produces, fills and seals up to sixty pillow bags per minute, hour after hour throughout the day.

Whatever film you want to use, whether Poly, MSAT or any other flexible heat-sealing material, the Hamac-Transwrap will cope. More than a thousand units operating in conjunction with a great variety of – interchangeable – feed units, prove the high degree of versatility and adaptability of the Hamac-Transwrap. All our experience is at your service.

Hamac Hansella

Hamac-Hansella Maschinen GmbH, Düsseldorf, Western Germany



KINGS
DELUXE
INDIVIDUALLY WRAPPED

Test the "buy-sight" of your package design

New Instrument Measures Visual Impact Scientifically

Consumer sales are built with "impact" packages. Now there's a way to evaluate the comparative visual impact—the "buy-sight"—of your package design.

An exclusive new optical instrument called the *Polarascope* has been developed by the Folding Carton Division of St. Regis®. It is designed to make comparative evaluations of each key segment of your package design: color dominance, lettering style and size, relationship of elements and total effectiveness. In short, the *Polarascope* takes much of the guesswork out of graphic design . . . lets you put a new package on the market with confidence.

The *Polarascope* is only one of many instruments in our Department of Visiometrics. There are others to analyze color impact, measure attention value and TV projection. Through such developments, the Folding Carton Division of St. Regis is now helping to create highly successful packaging for leading manufacturers in many different fields. These services are *yours*—part of the complete "package" from St. Regis.

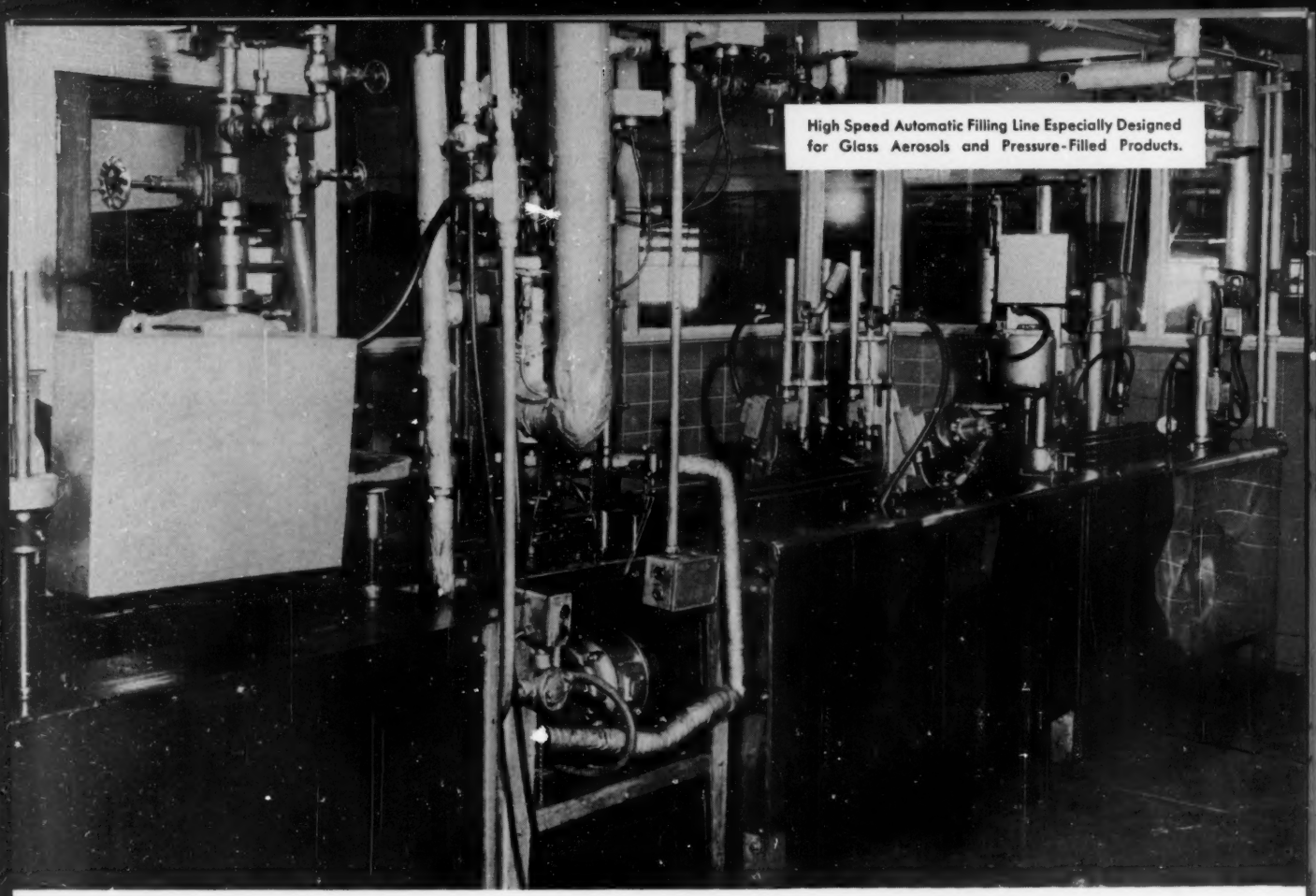
If you'd like information about testing your own package design, just find the St. Regis plant below that's nearest you and drop us a line today, won't you?

Remember, imaginative packaging means a lot in any business . . . and St. Regis cartons *mean business.*

FOLDING CARTON DIVISION

St.Regis PAPER COMPANY

CARTON CRAFTSMEN, CHICAGO, ILLINOIS
CORNELL PAPERBOARD PRODUCTS CO., MILWAUKEE, WISCONSIN
CROWELL CARTON COMPANY, MARSHALL, MICHIGAN
DUBUQUE CONTAINER COMPANY, DUBUQUE, IOWA
GREAT LAKES BOX COMPANY, CLEVELAND, OHIO
GULF CARTON COMPANY, PENSACOLA, FLORIDA
NIFTY MANUFACTURING COMPANY, BIRMINGHAM, ALABAMA
POLLOCK PAPER COMPANY, DALLAS, TEXAS



High Speed Automatic Filling Line Especially Designed for Glass Aerosols and Pressure-Filled Products.

FLUID's only product is SERVICE –therefore we don't compete with customers

The business activities of Fluid Chemical Company, Inc., do not include the manufacture or sale of any product for our own account. Our sole product is contract liquid and aerosol filling service. Obviously, for this reason, there can be no conflict of interest between us and our customers.

FLUID has two of the largest and most modern contract liquid and aerosol filling plants in the United States, with seven filling lines. Ample formulating and storage facilities are also available, as required. Quality control of materials and of mixing and filling operations leaves no margin for error.

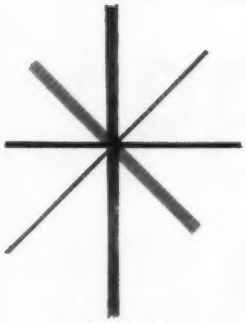
A completely equipped laboratory and skilled technical staff are capable of formulating your product for liquid, spray or foam dispensing. Deliveries are facilitated by an eight-car railroad siding, multiple shipping dock, complete warehousing and up-to-date mechanized handling facilities.

Write or telephone us for an early exploratory conference regarding your filling requirements.

Packaged by FLUID *Chemical Company, Inc.*

MANUFACTURING CHEMISTS SINCE 1921

872 Mt. Prospect Ave., Newark, N. J. **HUmboldt 4-1000**



Better labeling...less work ...the HEAT SEAL way!

Labels by Steigerwald

Fine labels of all kinds at reasonable cost

Heat Seal requires no glue, no water, no clean-up. Ideal for bag headers and containers of practically all shapes and materials. Instantaneous or delayed action. Made to exact specifications, for use with high speed equipment. Continuous rolls or individual.

Send your present labels for redesign, without charge or obligation, or for estimate on printing in present form. A. M. Steigerwald Company, 1440 West Wrightwood Ave., Chicago 14. LAkeview 5-5920.

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Stollmaier & Son, Inc.
Mariemont Center Bldg.
Bramble 1-0222

ST. LOUIS 5, MO.
Marvin Yates Co.
111 So. Bemiston Ave.
Parkview 6-0296

LOUISVILLE, KY.
Practical Products Co.
319 Jefferson St.
Juniper 3-8422

CLEVELAND 21, O.
A. C. Foster
4040 Mayfield Rd.
EVergreen 2-7555

KANSAS CITY 12, MO.
A. B. Mason
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P.O. Box 62
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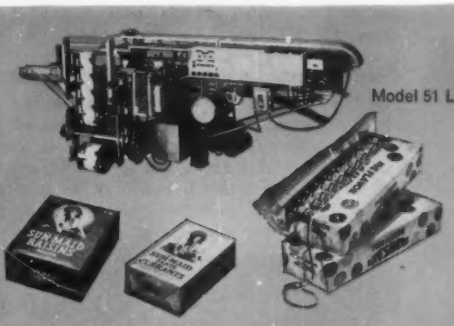
GOLD OR SILVER EMBOSSED • DIE-CUT OR SQUARE • FOIL SEALS AND TAGS • FLAT OR CONTINUOUS ROLLS FOR HAND OR AUTOMATIC USE • HEAT SEAL • PRESSURE SENSITIVE • SPECIAL ADHESIVES

BATTLE CREEK'S MODEL 51 SERIES PROVIDES

SPEED WHEN SPEED COUNTS!

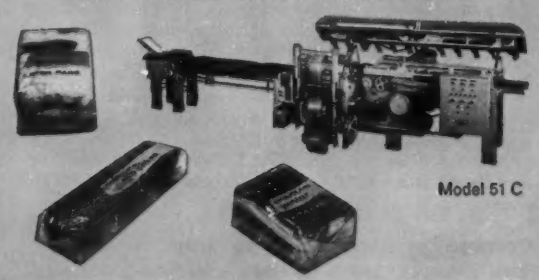
Here are six Model 51 machines "tailored" to solve individual packaging problems created by the inherent nature of the product, the high speed demands of prior processing equipment and the need for impelling product sales appeal. One of these models is best suited to precision package your product neatly, tightly in heat-sealing cellophane, laminated papers, wax-coated papers or heat-sealing foils. Each model has the same universal "Continuous Flow" characteristics which offer dramatic labor saving advantages and unique operating economies. All are ideal for long production runs of products within these size ranges: 3¼"—5½" long or 6"—11" long, 2½"—4¼" wide and ¾"—2¼" high. Inquire today about the Model 51 series and discover what Battle Creek Packaging Machines can do for you.

eliminate frustrating production bottlenecks with overwraps of 120 to 240 per minute

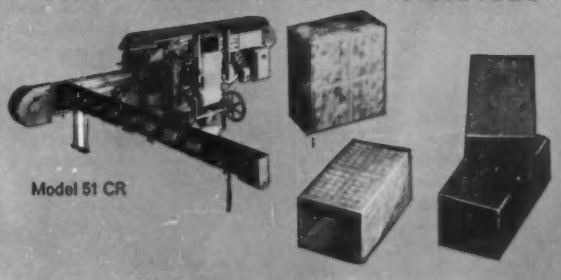


GENERAL RECTANGULAR APPLICATIONS

SOFT IRREGULAR PRODUCTS



FRACTIONAL CRACKER PACKAGES



Continuous Flow® PACKAGING

BATTLE CREEK *packaging machines, inc.*, BATTLE CREEK, MICH.

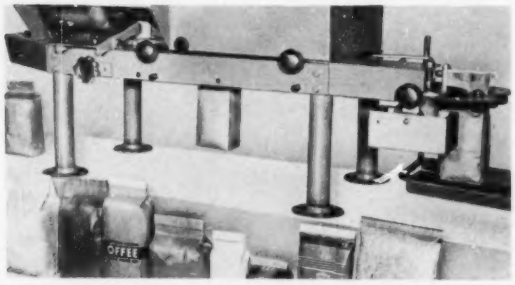
EQUIPMENT & MATERIALS

New thin, lightweight tin plate

Ferrolite 10, a new grade of lighter, thinner tin plate priced 15 cents per base box lower in all basis weights than present Ferrolite, has been introduced by U. S. Steel. Now commercially available, the new grade has a coating of 1/10 lb. of tin per base box. Previously, Ferrolite was produced in only a single grade with a tin coating of 1/4 lb. per base box. (See "Thin-Gauge Tinplate Cuts Weight 50%," MODERN PACKAGING, October, 1960, p. 60.) Initial uses for the new grade of tin plate are expected to be the citrus-juice-concentrate and motor-oil fields, with other applications following after further experimentation, the supplier notes. Even lighter basis weights than those now available appear likely in the foreseeable future, spokesmen for the company report. For further details, contact *United States Steel Corp., 525 William Penn Place, Pittsburgh 30.*

Continuous-motion bag-closing machine

Fry has introduced a compact bag-closing machine for plain, coated or lined paper bags. Designated Model GS-54, the unit is also said to handle bags which must be double-folded, heat sealed and glued for maximum protection. Its belt speed is adjustable from 250 to 750 in. per minute. The unit will seal bags as fast as an operator can normally feed them, the company says. The machine is shipped completely



assembled and is said to be operable within minutes of unpacking. It is 55 in. long, 18 in. wide and 20 in. high. The new unit is primarily designed for bags containing 5 through 15 lbs., the company notes. For further details contact *George H. Fry Co., 42 E. Second St., Mineola, N. Y.*

Improved interior-coated aerosol can

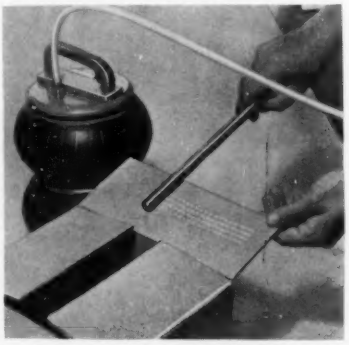
Crown Cork & Seal is marketing an aerosol can whose production involves an internal-coating process that is said to eliminate coating scratches that could occur in can-body fabricating. Known as the Crown Spra-Clad, the 16-oz. aerosol can is coated internally after the body has been formed in the round, in addition to the conventional coating in the flat. Cans are available with various interior coatings designed for compatibility with the product to be dispensed and they are reported to be especially suited for such hard-to-hold products as starches, window cleaners, shave creams and other water-base products. *Crown Cork & Seal Co., 9300 Ashton Rd., Philadelphia 36.*

Line of extrusion coatings and laminates

Chase Bag is marketing a new and diversified line of extrusion-coated and laminated packaging materials. Available now are wide variety of combinations of paper, plastics, foil, mesh and textiles designed for use of food, drug and specialty-item packagers. The line includes such items as a polyethylene-coated paper for individual sugar pouches; a four-ply build-up of paper/polyethylene/aluminum foil/polyethylene for powdered milk and soup mixes, and cellophane/Saran/polyethylene combinations for jam, ketchup, shampoo, hand lotion and the like. The materials, printed in up to six colors, are available as roll stock or pouches, the supplier notes. Additional information is available from *Chase Bag Co., 355 Lexington Ave., New York 17.*

Portable adhesive applicator

A new portable adhesive applicator that weighs only about 10 lbs. when it is filled has been introduced by the Systemation Corp., a Bemis affiliate. The unit is operated by compressed air and is said to withstand pressures exceeding 250 lbs. per sq. in. The air charge is taken in through an automobile tire-type valve, so the applicator can be filled easily, the supplier notes. The gallon unit may be adjusted to adhesives of varying viscosities. The glue or bead pattern is also variable. In addition to serving as a portable unit, the applicator can also be adapted for use on machines now using glue pots or glue wheels. It is reported to be easy to fill, clean and maintain. Additional information can be obtained from *Systemation Corp., 111-H N. Fourth St., St. Louis 2.*



High-density polyethylene resins

Now commercially available from Hercules are three new high-density polyethylene resins which are said to possess outstanding properties for injection-molding as well as for film and paper coatings. The new resins are members of the same family of polyethylene resins first introduced by Hercules for blow-molded containers earlier this year. (See "Resin For Rigid Thin-Wall Containers," MODERN PACKAGING, August, 1961, p. 54.) All three have a density of 0.962 and are designated Hi-fax 2000, 2100 and 2200. They are reported to exhibit great hardness and have high heat-distortion temperatures. Although stress-crack resistance is not outstanding, it appears adequate for all but detergent bottle applications, the supplier says. They are especially suggested for large-shot injection-molding applications where stiffness—without brittleness—in thin sections is required. Hi-fax 2000 (melt index 9.0) is said to offer the easiest molding with little loss of tensile yield strength. Hi-fax 2100 and 2200 (melt indices 5.0 and 3.5 respectively) offer increased impact strength. Hi-fax 2000 is also recommended for film and paper coating applications. Further details are available from *Hercules Powder Co., 910 Market St., Wilmington, Del.*

Corrugated fruit-and-berry tray

Stone Container Corp. is offering a versatile new corrugated tray which is said to reduce handling time and expense during the picking, storing, shipping and merchandising of berries and other fruits. The container holds eight quarts and is called the Piggy Pak. It features an integral, raised handle which runs lengthwise down the center of the tray. This replaces the conventional wire end-handles and enables the tray to be carried in one hand instead of two, says the supplier. In stacking, the corrugated handle of one tray fits into a recess in the bottom of the tray above, locking them

your GAYLORD man is well-rounded in packaging

He has a quick, accurate answer to any question on corrugated packaging, from the design to the delivery of your product.

He makes it his business to understand every phase of packaging operations—box-making, printing, filling, closure, handling, shipping . . . the works. This way he makes sure your Gaylord containers perform most effectively and economically

Ask him one question or a dozen; he's as near as your telephone, right now.

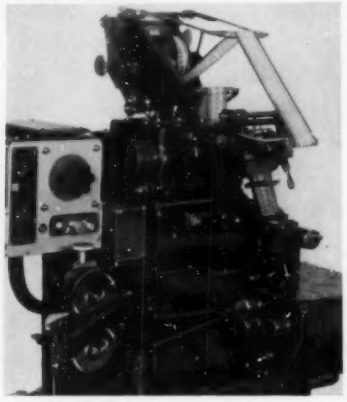
CROWN ZELLERBACH CORPORATION
GAYLORD CONTAINER DIVISION

IN CANADA • CROWN ZELLERBACH CANADA, LTD. VANCOUVER, B. C.

HEADQUARTERS, ST. LOUIS
PLANTS COAST TO COAST

securely together. In quantity lots, the trays can be supplied with custom printing to identify the grower or marketing organization. Additional information is available from *Stone Container Corp., 360 N. Michigan Ave., Chicago 1.*

High-speed cut-and-wrap machine



A new high-speed cut-and-wrap machine — the Forgrove 42C—is offered by Package Machinery Co. At reported speeds of up to 750 per minute, the unit will cut and wrap toffee, caramel or high boiled sugar in a plastic state. The supplier claims that the machine is specially designed for twist - wrapping cylindrical, rectangular or square shapes. A new paper-splicing unit is said to make possible continuous paper feed for uninterrupted production. A rotary—rather than guillotine—paper knife, electrical speed controls and a speed indicator are additional features cited by the company. The unit wraps with plain or printed cellophane, waxed paper or reinforced foil outer wrap. Waxed paper or foil inner wraps are optional, the supplier notes. A handwheel adjustment regulates the number of pieces per pound. For full details, contact *Package Machinery Co., East Longmeadow, Mass.*

Expanded line of plastic resins

Rexall is now offering an expanded line of polystyrene resins and is also marketing a line of polypropylene resins. The polystyrene line includes impact grades which are said to offer exceptional processibility, good color, bend strength and elongation along with high flexural and tensile strengths. The line also includes two new crystal resins which are said to have exceptional uniformity, fast set, superior clarity and low gel. The company has also entered into resale agreements on a complete line of polypropylene resins (similar to its arrangements on conventional high- and low-density polyethylenes). All of the resins will be sold under the supplier's Elrex trademark. For details, contact *Rexall Chemical Co., Div. Rexall Drug & Chemical Co., Beverly Blvd., Los Angeles 54.*

High-gloss wax coating

Weyerhaeuser introduces a new cast-coated ultra-high-gloss wax finish for cartons. The new coating is said to produce a high sheen and give a look and feel of superior quality to consumer cartons. The high-lustre wax finish is also reported to add depth and clarity to color reproductions and to help the package stand out on the supermarket shelf or in the freezer cabinet. Having a smooth finish, it helps keep the package clean and fresh looking, the supplier notes. The coating is suggested for cartons for frozen foods, butter, ice cream, pharmaceuticals as well as other areas where a waxed carton is necessary or desirable. For additional information, contact *Weyerhaeuser Co., Boxboard & Folding Carton Div., 919 N. Michigan Ave., Chicago 11.*

New automatic bag loader

New from Carbert is the Model M-40 bag loader. The unit is said to require only one operator and to save time and money in film-bag loading operations. Plastic bags are placed in the magazine—up to 1,000 at a time—and the machine is ready for operation. The operator starts the objects to be bagged onto the machine intake. The bags are fed individually and held open by air current; the objects being packaged are inserted, and a pusher arm transfers the filled bag to the discharge conveyor. According to the company, there is no need for trays, cards or stiffeners with most products. Working in conjuction with supplier's, Model 1010 bag sealer (see Polyethylene Bag Sealer, MODERN PACKAGING, August, 1960, p. 148), the combination becomes a single integrated machine to automate film packaging operations, the supplier notes. The unit is suggested for use in bakery-goods packaging as well as for knit goods, paper items, hardware, textiles and publications. For additional data, contact *Carbert Mfg. Co., Div. Pneumatic Scale Corp., 143 Sidney St., Cambridge 39, Mass.*

New rigid-urethane-foam supplier

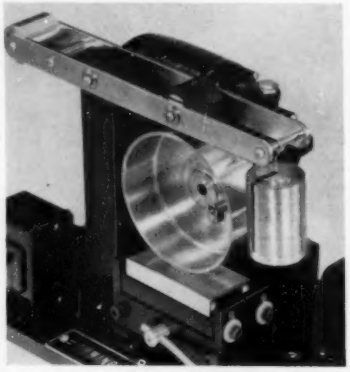
H. E. Werner, Inc., has entered the rigid-urethane-foam packaging field with the introduction of Hewfoam. Specifically intended for economical packaging and safe shipping of odd-shaped or fragile products, the foam is applicable for both large and small shipping situations, the supplier notes. The foam is moisture-proof and is said to provide an efficient insulation. It is furnished as a container with product spaces that conform to the shape of the product. It is light in weight (to cut down on shipping costs) and is suggested for packaging office machines, bottled liquids, delicate instruments, laboratory supplies, perishables (such as pharmaceuticals), glass, chinaware, electrical appliances and radio and television parts. *H. E. Werner, Inc., Bethel Park, Pa.*

Cost-cutting injection-molding unit

Plastic Assembled Products has developed a new high-speed injection-molding machine that is claimed to cut mold costs by 75%. The machine is of rotary design and is geared to deliver about 40 parts per minute. The steel molds used in the process have a production life of more than a million parts, the company claims. The machine takes molds up to 3 in. in diameter or length. Among the many products suggested for production on the unit are polyethylene plugs for bottles and spout caps. More complete information is available from *Plastic Assembled Products, Inc., 1200 Rosedale Ave., Baltimore 6.*

Wet-rub coated paper tester

Thwing-Albert offers a new wet-rub tester which is said to provide a reliable method for quantitative evaluations of coated papers.

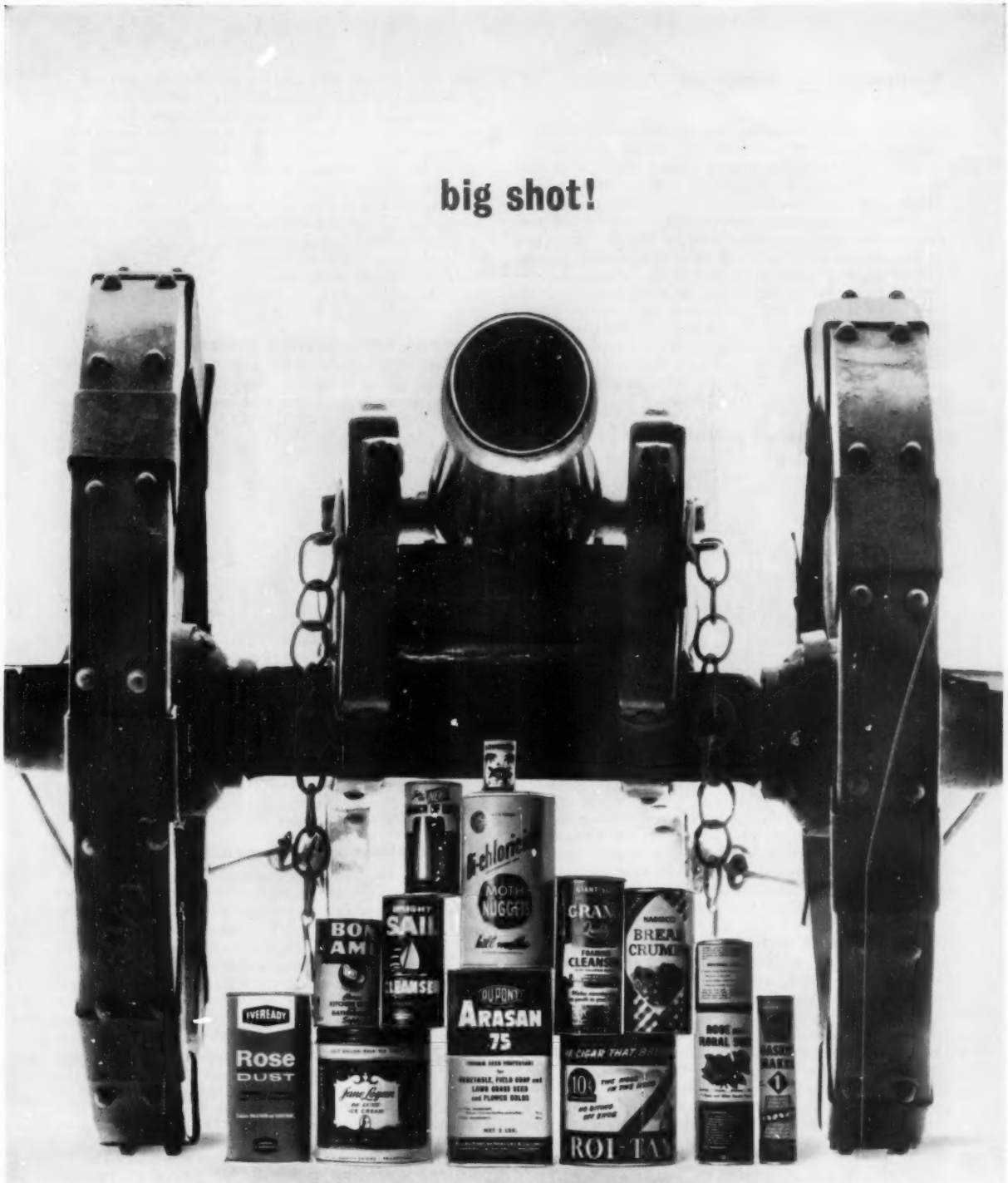


The test method involves wrapping the test specimen around a stainless-steel drum and rotating it against an idler-roll covered with smooth-surface gum rubber to provide slip-free operation. The effective weight of the idler against the sample may be varied by means of auxiliary weights supplied with the instrument. The weight of the solids removed from the sample during a predetermined number of revolutions is obtained by evaporating the reagent-grade water through which the sample rotates during the test. Further information is available from *Thwing-Albert Instrument Co., Penn St. & Pulaski Ave., Philadelphia 44.*

Compact form-fill-seal machine

Gebrueder Hoeller of West Germany has introduced a new, compact and flexible pouch former, filler and sealer. Designated Model BMAH/U, it is designed for automatic pack-

big shot!



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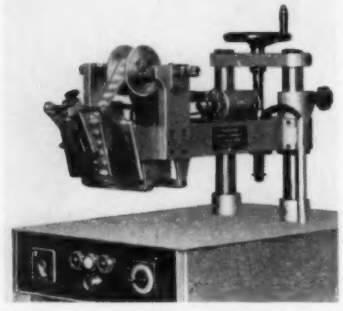
aging of powders, granulars, tablets, hardware and similar small objects, as well as liquids and viscous products. The objects are packed in flat pouches formed from rolls of such heat-sealable materials as lined and coated aluminum foils, plastic films and laminates, tea bag and filter papers, and glassines. The model can simultaneously form, fill and seal two pouches (with maxmium width of 2¾ in.) at a rate of 200 per minute. Pouches of up to 5⅞ in. wide can be formed singly at rates of up to 100 per minute, says the firm. Size change-overs are said to be relatively simple. The unit comes equipped with a volumetric filler for solids. Filling mechanisms for liquids, tablets and other items are available and can be swivel mounted in conjunction with the volumetric filler or separately. Further details are available from the supplier's U. S. and Canadian sales and service representative, *Ulbeco, Inc., Paramus, N. J.*

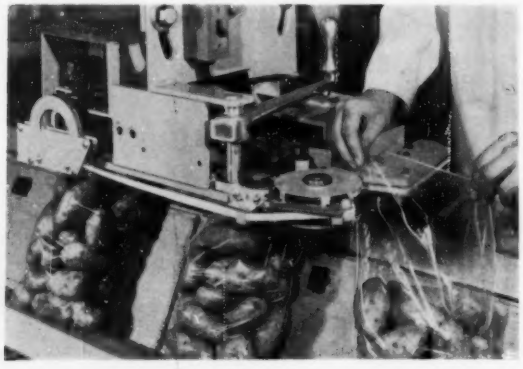
High-speed labeling machines

A new line of labeling and decorating machines has been introduced by the Decal/Label Div. of Saxton Barrett. The units are said to allow fast application of permanent thermoplastic and adhesive decalcomania labels on a wide variety of shapes and surfaces and on such materials as plastic, rubber, leather and cloth. The equipment is also capable of applying decals on rigid, semi-rigid and flexible polyvinyl-chloride tubing, the supplier says. Six different models—ranging from automatic machines designed to apply 800 to 1,000 decals per minute to semi-automatic portable models suitable for lower volume production—make up the line. Multi-color labels and decals are made to order in a wide variety of shapes, sizes and designs. Additional information on these new machines may be obtained from *Saxton Barrett Co., Decal/Label Div., P.O. Box 1508, Altadena 38, Calif.*



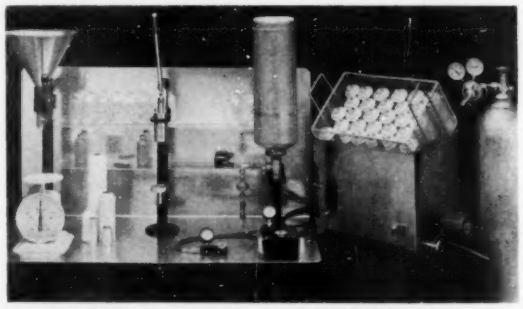
Automatic bag sealer

An automatic bag sealer designed to seal up to 80 bags per minute—and enabling easier and faster bag opening—is being offered by Minnesota Mining. The machine, which is said to be adaptable to all types of polyethylene bags as well as to cellophane and cloth bags, features a closure device that adheres a pressure-sensitive tape seal around the closure. Called the Scotch brand S-605, the machine closes the bag by twisting its top and applying a strip of pressure-sensitive tape. It is designed for bags of up to 10 lbs. in capacity and is especially suggested for produce and other food and non-food supermarket-type items. The seal can be applied with a Y-shaped tab for easy breaking of the seal, 3M notes, and filled bags can either be hand-fed or conveyed into the machine's gathering and taping mechanism. Various size bags—from 3 to 10 lbs.—can be gathered and sealed one after the other with no machine adjustment. Reportedly, only slight adjustments are necessary for bag weights below 3 lbs. A quick-threading mechanism is incorporated for fast and easy tape roll replacement, the supplier notes. The machine is designed for tape widths from ⅜ to ½ in. and tape roll diameters up to 9 in. Length of each seal depends on the size of the bag and caliper of the film. The unit is said to be adaptable to most pressure-sensitive tapes. *Minnesota Mining & Mfg. Co., St. Paul.*



Low-run aerosol-filling equipment

Pressure Pak introduces its new line of laboratory and small-run aerosol filling equipment. Claimed to be extremely low in price, the basic unit (Model 1000-M) consists of a filler, crimper and gasser together with a pressure tester and nitrogen/fluorocarbon filling mechanism. Also available is the thermostatically controlled leak-test tank equipped with a ground plug and socket operating from an 110-volt outlet. All packaging-line operations are performed manually. The unit will handle cans and bottles ranging in size from ½ to 80 oz. It is made of stainless steel and aluminum and requires only eight square feet of shelf space. *Pressure Pak, Inc., West Palm Beach, Fla.*



Cost cutting semi-automatic strapper

A new flexible, high-speed strapping unit that is said to enable one man to strap large-size containers unassisted and to be fully adjustable to production-line changes has been introduced by A. J. Gerrard. Designated Model 480, the unit will handle all sizes of flat strapping from ⅜ by 0.015 in. to ¾ by 0.023 in. and is practically unlimited as to the height and width of unit it can strap, the company claims. The single operator inserts the reel-fed strap into a chute and then an electric motor feeds the strap around the container to the exact length desired. The strap is then pneumatically tensioned to the pre-set pressure and sealed and cut by a new and reportedly high-speed attachment. The strapper is said to be low in cost and is custom built to customer requirements. It can be easily altered on the spot to almost any future production line requirement, the supplier says. *A. J. Gerrard & Co., Des Plaines, Ill.*

No-refrigeration aerosol for perishables

Almost indefinite storage of concentrated milk products, citrus juices and other liquid concentrates is claimed by Continental Enterprises for its new Propel-Pak pressurized package for dispensing beverage concentrates. The recently patented tilt-valve aerosol package is said to keep the concentrates without refrigeration and to retain their natural flavor and vitamin value. Propellant gases maintain pressure against the valve and over the concentrate itself. The inert gas expands after each use to safeguard the contents against chemical or organic change, the company notes. A new self-agitating "jet valve" forces the concentrate from the container through a small discharge orifice at a high velocity to effect reportedly complete self-agitation of the milk or

[*Continued on page 180*]

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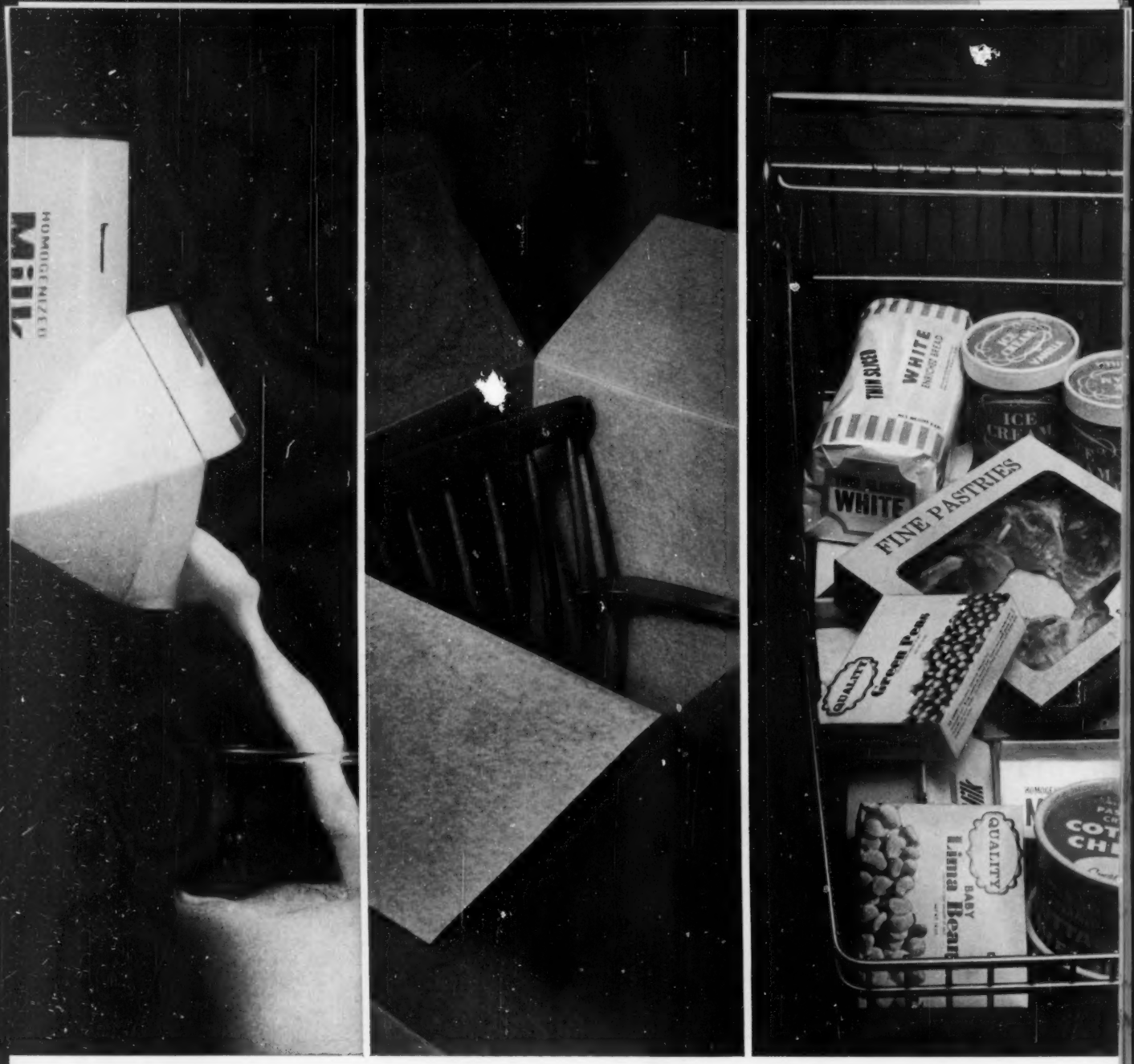

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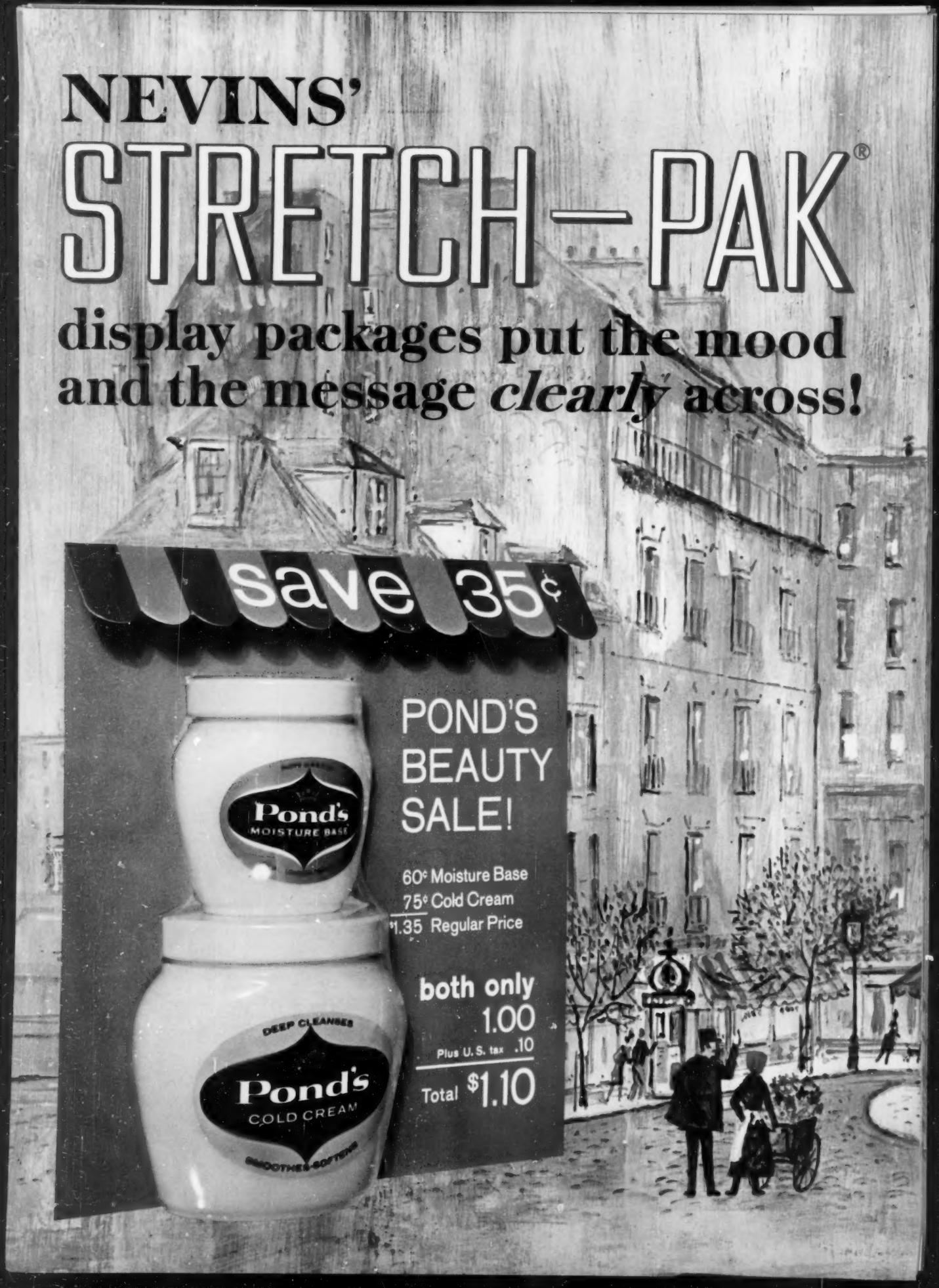
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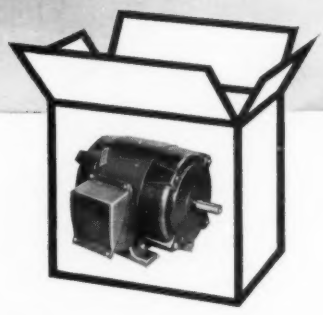

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WE ASK THE READERS

How can 'deceptive packaging' be controlled or eliminated?

Robert Sidney Dickens
President
Dickens, Inc.
Chicago

Although deceptive packaging currently occupies the spotlight, with many opinions already voiced and many more yet to come, it would seem that the real problem lies in clearly defining just what constitutes deception in packaging.

Up to this point, the definition depends entirely on the personal interpretation of the individual. Boundary lines are extremly fuzzy. Until they are clarified, we will march in a huge circle, expending considerable effort while consistently coming back to our starting point. Our industry has any number of qualified associations representing all facets in the field—from manufacturer to converter to distributor. It would seem that the first step would be for qualified representatives to sit together and outline specific areas, then prescribe a code of ethics or responsibilities that would give all a positive direction to follow.

William M. Goldsmith, *Executive Vice President, Dave Chapman, Inc., Chicago:* Two things concern us most about this question and the situation in general. First, we hope that the attention being focused on "deceptive packaging" does not give a misleading impression that this evil is relatively widespread. It just plain isn't that serious. The manufacturer who intends to survive and prosper knows that he can't afford to be willfully or seriously deceptive in packaging his goods or products.

The second point of concern is what we would term "inadvertent deception" or, in the language of Horatio Alger, "out of ignorance . . . not presenting things as they should be." This generally is a result of ill-considered design and/or construction, or of treating the package as an incidental and last-minute part of a total marketing effort.

We are suggesting that too frequently those who package products do not adequately consider the consumer's point of view in creating their packages. They are too often willing to accept a package that is "par for the course—as good as can be done—it functions satisfactorily." Very often the package is *not* as good as might be done and the inadequacy of the resulting package may quite inadvertently do a poor job of communication, or even be inadvertently deceptive.

In summary, then, we are declaring that the hue and cry over willful deception is out of context with the facts of the case. There are a few such situations, but there is a lot more "inadvertent deception" which is working much more seriously to the disadvantage of both the producer and the consumer.

Jack P. Freeman, *Treasurer, Castle Products Co., Irvington, N.J.:* In my opinion, there isn't any need for control. The Government should leave this to the natural competitive conditions which will solve the problem by having the users and the buyers steer away from those manufacturers who deceive.

Whenever a package is short in weight or volume, I believe it is something the manufacturer would have never allowed to go out on the market. Such errors are attributable to faulty equipment or to errors of personnel, such as quality control. The average manufacturer would not increase his own costs of production by using more cardboard, fillers or dividers than he thought necessary to safeguard his product from the possibility of shipping and handling damage.

Gardner H. Stern, Jr.
Vice President, Operations
Hillman's, Inc.
Chicago

Speaking from the viewpoint of supermarket-chain management, one effective way to control deceptive packaging is for retailers to take the responsibility for screening out such packages as they come to our attention in our buying committees, or at whatever point the buying decision is made.

We are not doing our job if we don't protect our customers. In the long run, public pressure will bring Government action and regulations to bear in this area, and part of the cause will have been the retailers' lack of concern for the problem. Frankly, the public has a right to be protected and if retailers (and manufacturers) show an unwillingness to do so, the Government will not be reluctant to step in, as well it should. Therefore, from both a moral and practical

viewpoint, we retailers have an important and vital stake in preventing deceptive packages from appearing on our shelves wherever we find this possible.

Frank Gianninoto
President
Frank Gianninoto & Associates
New York

The Senate investigation of "deceptive packaging" is currently, I fear, wide of the mark. The inquiry began into inaccurate labeling and deliberate or apparent "swindling" by certain packagers. More recently, it has descended to a point where housewives are encouraged to air any gripe about packaging that comes into their heads. This has transferred the issue from the problem of packaging to a question of whether or not a package should serve as a sales device. The ladies are complaining that manufacturers are using packages to help sell their products!

As a package designer, I have nothing to say about the copy on a package. I do, however, have the responsibility of making the package stand out on a supermarket shelf, beckon to the shopper, urge her to buy. Does this make *me* a swindler?

I also want to make it convenient for the shopper to take the package from the supermarket, to store it in her home, to open and to use it. When designing a package for dehydrated soups, for example, I may pack it in a moistureproof, heat-sealed envelope, then put that envelope in a box which will stand up on a supermarket shelf and be convenient to store in the kitchen. The shape of the envelope and the nature of the contents will require that there be a certain amount of vacant space both in the carton and in the envelope. Is this swindle?

I am sorry that the Senate investigation has strayed from the point. I hope the members of the subcommittee will become familiar with the whys and wherefores of modern packaging practices in order to be able to distinguish honest salesmanship from out-and-out deception. The line, I feel, is very clear.

Robert F. Elrick, *Chairman, Elrick & Lavidge, Inc., Chicago:* In a sense, package designers have been "conditioning" consumers for ages. By means of physical shape and graphic design they have created packages to give the impression that the product packaged within is vastly superior to similar products with which it competes. This is visual salesmanship.

In my opinion, the vociferous proponents of standardized packaging are frequently opposing consumers' best interests by demanding that all competitive packages be similar in content area. They falsely assume that the greater the quantity, the greater the quality-value relationship. Fortunately, the great majority of consumers are not so naive. Because the consumer is king, few products of inferior end-benefit value can exist for very long under our system of free enterprise.

The objective of any Governmental controls should be limited to the elimination of deceptive packaging that is based on fraudulent intent. Fortunately, this aspect of deceptive packaging is already under the jurisdiction of the Federal Trade Commission and the Food & Drug Administration. The real question today is not how we are to control these illegal practices, but what we can do to limit the operation of the control agencies to the areas where they can perform the most practical service for all citizens. To accomplish this objective, we must make a concerted effort to insure that the activities of these Governmental agencies are limited to those instances where deceptive packaging is concerned with fraudulent intent.

Saul Nesbitt, *President, Nesbitt Associates, Ltd., New York:* It is important to educate the public as to why some items are packaged as they are. As consumers become more enlightened, the present accusing cry about "unfair" packaging will diminish.

For example, "extended packaging" (sometimes referred to as over-size packaging of small items) is a technique utilized to discourage pilfering in self-service retail outlets. According to a recent survey we made, few consumers appreciate the fact that a high rate of pilferage affects the price of the product. And few realize that many desirable items have to be discontinued by self-service stores until they are repackaged in such a manner as to reduce theft.

The packaging-designer's job is to make the client's product more appealing than those of competitors. However, no professional designer of integrity will ever propose a dishonest or misleading package.

Robert G. Neubauer
Robert G. Neubauer, Inc.
Fairfield, Conn.

Objectives which are established by top management frequently suggest that integrity, quality, distinction and background should be built into the new "corporate look" or image that is to appear on all printed materials, including packaging. Deceptive packaging —whether by size, slack fill, confusing contents statements or other devices—quickly negates these ideals.

If we agree that form follows function, then automatically we turn to honest forms and sizes that best suit the product. Convenience in use and re-use goes a long way toward promoting repeat sales, but this positive characteristic can easily be erased if any effort at looking larger or deceptive is employed. Except where an honest need for protection exists, overly protective partitions, wasted space and slack fill do nothing but antagonize both dealer and consumer.

Blister and skin packaging, on the other hand, present a larger unit, reduce pilferage and give the manufacturer an honest chance for display of tiny items.

With mounting in-store profusion of products, there is no room for the confusion [*Continued on page 218*]

U.S.I. POLYETHYLENE NEWS

A series of advertisements for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

OCTOBER, 1961 — U. S. Industrial Chemicals Co., Division of National Distillers and Chemical Corporation — 99 Park Ave., N. Y. 16, N. Y.

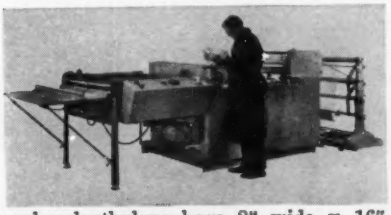
Packaging Notes

Polyethylene pour spout comes in sizes to fit quart and gallon paint cans. Snaps on and off in seconds and is reusable. Keeps paint out of lid groove. Puts an end to messy dripping. Available imprinted with advertising message.

Square-bottom and 3-D style polyethylene bags are being produced by a N. Y. converter from black and natural film in "any size . . . all gauges." A specialty is large, tailored shrouds and covers for domestic and military protective packaging. The largest to date: 450" x 96" x 168". Electronic seals are said to exceed strength of base material.

3-D style polyethylene bag can stand unsupported for easy filling.

Bottom-seal attachment is now available for side weld bag machines made by a leading company. With it, bottom-seal polyethylene bags 8" wide x 16" long can be produced at a rate of 200 per minute. According to the manufacturer, production speeds on large bags are also excellent, since bags up to 65" long may be made with a single stroke.



Tote barrel of molded polyethylene construction has sturdy wire handles and masonite reinforced bottom. It's dent-proof, water-proof and rust-proof, yet light in weight — an ideal multi-purpose container. Available in various sizes, including 25 and 45 gallons.

Polyethylene Now Slicing Off Sizable Share of Breadwrap Market

Savings Potential Is Prime Mover, But Protective Qualities and Film Clarity Are Factors

Currently, some ten million loaves of bread per day are being wrapped in polyethylene film in the U.S.A. And the figure is growing at an increased rate, according to U.S.I. marketing specialists. A major west coast bakery chain, for example, recently installed 150 machines for handling polyethylene overwraps.

Lag Turns to Spurt

Volume use of polyethylene by bakeries began materializing in 1959, when about three million pounds of film went into the market. Last year consumption increased to between six and seven million pounds. *This year, it's expected to be over 20 million pounds*, or over 1.7 billion loaves of wrapped bread.

Year's output of bread wrapped in polyethylene film by America's bakers is expected to total more than 1.7 billion loaves.

Savings: $15,000 Per Year Per Machine

More and more bakeries, apparently, have come to recognize the savings afforded by polyethylene over competitive materials. Cellophane, for example, costs 62¢/lb.; has a yield of 25,000 sq. in./lb. at .76 mil. Polyethylene, now down to 53½¢/lb., has a yield of 25,700 sq. in./lb. at 1.15 mil.

On a yearly basis, the difference becomes substantial. To illustrate: One wrapping machine operating at a 50 loaf/min. rate, 8 hrs./day, 250 days/year would put out 6 million loaves. Thus a savings of $15,000 in material costs alone can be achieved.

Technical Difficulties Licked

Too, the wrapping and sealing problems which beset early users have now been overcome by better equipment, proper operator training and end labels with special adhesives. The availability of stiffer films with improved gauge uniformity, and cast film with greater clarity and gloss also contributed to widespread acceptance.

Sales Up, Returns Down

Nor can customer approval be overlooked. Bakeries almost invariably report increased sales, reduced returns after switching to polyethylene breadwraps. Consumers react to the soft, warm, "fresher" feeling imparted by the polyethylene and appreciate its keeping qualities.

Bakers To See Polyethylene Packaging Demonstrations

Visitors to the 1961 Baking Industry Exposition at Atlantic City, N. J., October 7-12, will have the chance to observe polyethylene packaging equipment in action. At Booth 858, five or six different types of M·A Packaging machines will be displayed, forming polyethylene bags around rolls, loaves of bread, and other baked goods. Other bread wrapping equipment will be exhibited at the show.

Bakers Review Packaged in Polyethylene

More than 1000 copies of the latest issue of *Bakers Review* magazine will be packaged in transparent polyethylene film and given away at the 1961 Baking Industry Exposition. M·A Packaging System equipment will be employed. Many publications are currently using polyethylene bags for mailing.

His 'n Hers

New from France . . . a nubbly textured polyethylene rain hat designed to be worn by either a man or woman. It comes in a colorful, pocket-sized pouch. Can be turned into a cloche, or into one of a choice of men's styles, in seconds.

Available clear or in opaque colors, the hats are vacuum-formed from PETROTHENE 239-27 in Neuilly-sur-Seine. The U.S.I. resin was selected because it imparts stiffness and gloss, while providing optimum processing properties.

POLYETHYLENE DIESEL FILTER PACKAGE PROTECTS BETTER, LOOKS BETTER, COSTS LESS

At Seymour Filter Company, individual polyethylene packages for each filter provide materials savings over old multiple-unit carton.

In switching from cardboard cartons to printed polyethylene bags for its diesel engine filters, Seymour Filter Company, Division of Cummins Engine Company, has realized the objectives it sought: superior product protection and packaging economy.

At its Seymour, Ind., plant the company recently started packaging filters in clear, tough polyethylene film made from U.S. Industrial Chemical Co.'s PETROTHENE® 112 resin. Using film in slit roll form, the company forms bags around the product on M·A packaging system equipment. This system is less expensive than using ready-made bags.

The new package gives the filter complete protection from dust, dirt and moisture — conditions common to storage areas in the field where the filters are kept for use in heavy trucks and road building equipment. Although filters are packaged individually, the new product is less expensive than the old multi-unit carton due to considerable savings in materials cost.

Product identity and attractiveness are considerably enhanced. Product description and company trademark — standing out in brighter, sharper color printing on film — catch the customer's eye. And the transparent polyethylene lets him see what he's buying.

Can your product package be improved and your packaging costs cut with automated polyethylene packaging?

As a producer of PETROTHENE polyethylene resins, U.S.I. has a trained staff of film and packaging engineers. They will be glad to work with you and your film supplier to see what advantages polyethylene has for you . . . help you find the best packaging system. Just write or call.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

Advertise

NOTICE

IMAGINE! Refres HER

advertise (ad'vēr-tīs), v. t.
to turn the attention of others to; announce; publish...

advertising, by turning the attention of others, by announcing, by publishing, is bringing more things to more people at lower cost.

so is lithography!

Through modern mass communications and distribution, the United States has become the most prosperous nation in the history of the world.

and lithography is playing a major part in this!

The Amalgamated Lithographers of America is proud to be advertising's partner in this great venture.

In its 80-year history this forward-looking union of fine craftsmen has concentrated on bringing lithography to its present superior degree of development, both technological and artistic.

A dynamic force for lithographic industry progress, the ALA has fostered technological development so that color, the great motivater, can work for marketing people at little more cost than black and white . . . on any number of materials: paper, cloth, metal, of nearly any coating, texture or color.

Lithography's superb reproduction has greatly widened the spectrum of what can be done graphically while its scientific advancement has lowered production costs.

Thus, through the ALA's programs for progress, all levels of marketing, from advertising through point-of-sale materials to packaging, can use more color, can move more merchandise more profitably.

That's why lithography is the fastest growing method of graphic arts reproduction.

etter

flavors

BIG

NOW!

ANY

NEW

STUPENDOUS

BARG

RE!

Do you use it?

FREE OFFER!

WIN

LIMITED TIME OFFER

Smoother

good good good

tastes better t

NEW

You get a lot to

ENJOY

Free!

a union advertises...

The Amalgamated Lithographers of America in its active partnership with marketing people realizes that its product, too, must be promoted. To this end the ALA recognizes that to advertise is to invest in its own future.

The ALA knows and has proved that a good craftsman is good economy.

The ALA believes that it is simple enlightened self interest to bring these facts to the attention of all who are concerned with putting ink on paper, cloth or metal.

The ALA promotes lithography to assure greater industry growth, a still higher level of technological development and more job opportunities for its members.

The ALA's promotional programs represent its assurance of the enormous continued growth of the lithographic industry.

Because of this philosophy our members enjoy a 35-hour week, three weeks paid vacation, paid holidays and all-encompassing welfare and pension programs. Our contract is the finest in all the history of organized labor.

The buyer of lithography from an ALA plant does not pay for obsolete processes. This has meant better production, quicker delivery, lower costs.

The ALA has made lithography your best graphic arts buy.

Specify lithography.

See for yourself.

AMALGAMATED LITHOGRAPHERS OF AMERICA

Local 1, Edward Swayduck, President, 113 University Place, New York 3, New York

Craftsmanship and Fraternity Since 1882

Design: Robert Hallock • Lithography: Queens Lithographing Corporation, Long Island City, N. Y., by members of the ALA, Local 1

DOESN'T ANYONE READ PLAIN ENGLISH?

● Careful motorists regard every other driver as a potential killer. They have nothing on us.

INLAND assumes your boxes will be handled by men who can't—or don't—read plain English like "handle with care".

So, while we print handling cautions on your boxes, we actually depend on quality raw materials, expert design, thorough testing and careful manufacturing to make sure INLAND boxes can "take it." That means your product is safe in an INLAND box, even if it rides to market like this:

dn END SIHT

Why do we work so hard to make sure? Because we like to read letters that begin, "We would like to reorder . . ."

MILLS:
Macon, Georgia
Rome, Georgia

BOX PLANTS:
Indianapolis, Indiana
Middletown, Ohio
Winchester, Virginia
Milwaukee, Wisconsin
Evansville, Indiana
Detroit, Michigan
Macon, Georgia
Erie, Pennsylvania
Ashtabula, Ohio
Orlando, Florida
Rome, Georgia
Biglerville, Pennsylvania
Louisville, Kentucky
Dallas, Texas
Chicago, Illinois
Philadelphia, Pennsylvania
Baltimore, Maryland
Omaha, Nebraska
South Haven, Michigan

INLAND CONTAINER CORPORATION
Corrugated Fiber Containers

General Offices: Indianapolis, Indiana

Partners in Progress with American Industry

THIS IS DU PONT "ELVAX"...

"ELVAX" vinyl resins are translucent, free-flowing pellets that blend readily with wax to form strong, flexible coatings for a wide variety of packaging materials. "Elvax" blends are easy to apply by hot-roll, curtain or solvent-coating techniques.

a new vinyl resin that gives wax greater versatility in packaging

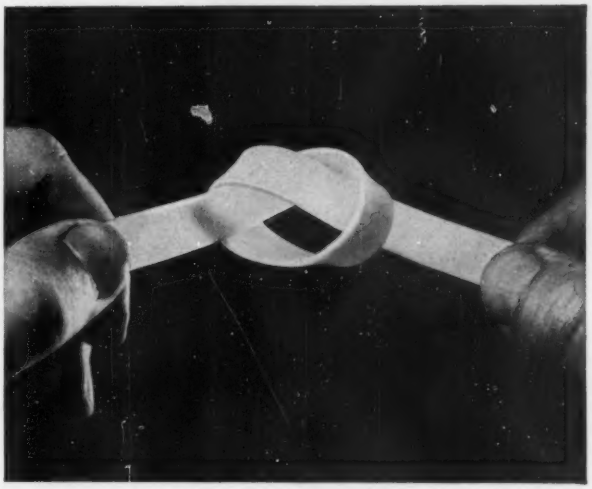
"Elvax" is a new, high-molecular-weight vinyl resin that makes possible low-cost wax coatings of superior adhesion, flexibility and toughness with excellent water-barrier properties.

With "Elvax" you can, for the first time, control the water-vapor transmission rate (WVTR) of wax coatings simply by varying the ratio of "Elvax" to wax. As little as 5% of "Elvax" added to wax reduces the creased WVTR of unmodified wax coatings by 50% without impairing the flat WVTR. In addition, resistance to grease penetration is improved significantly. When 40% "Elvax" is blended with wax, flexible 1-mil coatings with flat and creased WVTRs of 0.2-0.4 gms./100 in.^{2}/24 hours are obtainable.

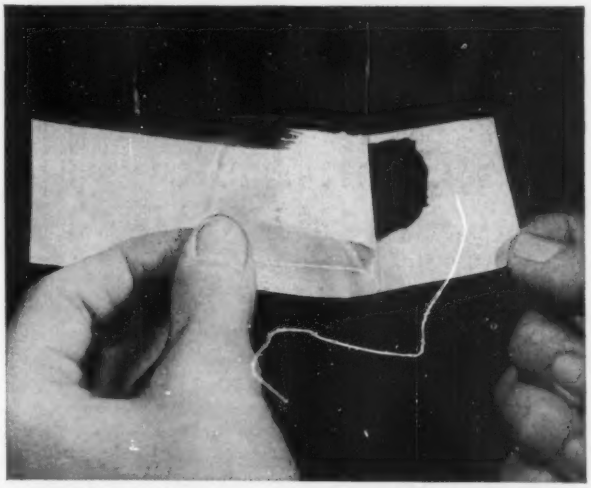
You can obtain tough, flexible adhesive bonds using "Elvax" alone or combining it with waxes, resins, rosins and rosin derivatives. "Elvax" exhibits strong adhesion because of the chemically active polar groups in its molecules. Flexibility and toughness (see upper right) result from its rubber-like, noncrystalline structure and high molecular weight. Hot-melt, solvent and pressure-sensitive adhesives based on "Elvax" adhere tightly to all films used in packaging today (see right).

Since "Elvax" will be used in food packaging applications, Du Pont is currently completing a nineteen-month study which will be used to petition the FDA for permission to use "Elvax" where contact with food is concerned.

You can order "Elvax" now in commercial or evaluation quantities. Our new booklet on "Elvax" provides information on properties and application methods . . . suggests possible uses. Write: Du Pont, Electrochemicals Dept., Vinyl Products Division, Room N-2531, Wilmington 98, Delaware.



FLEXIBILITY is demonstrated by tying a strip of paraffin wax, blended with 40% "Elvax", into a knot. When "Elvax" is added, the strip becomes plastic...will take 50% elongation before it breaks . . . is flexible at –20°F.



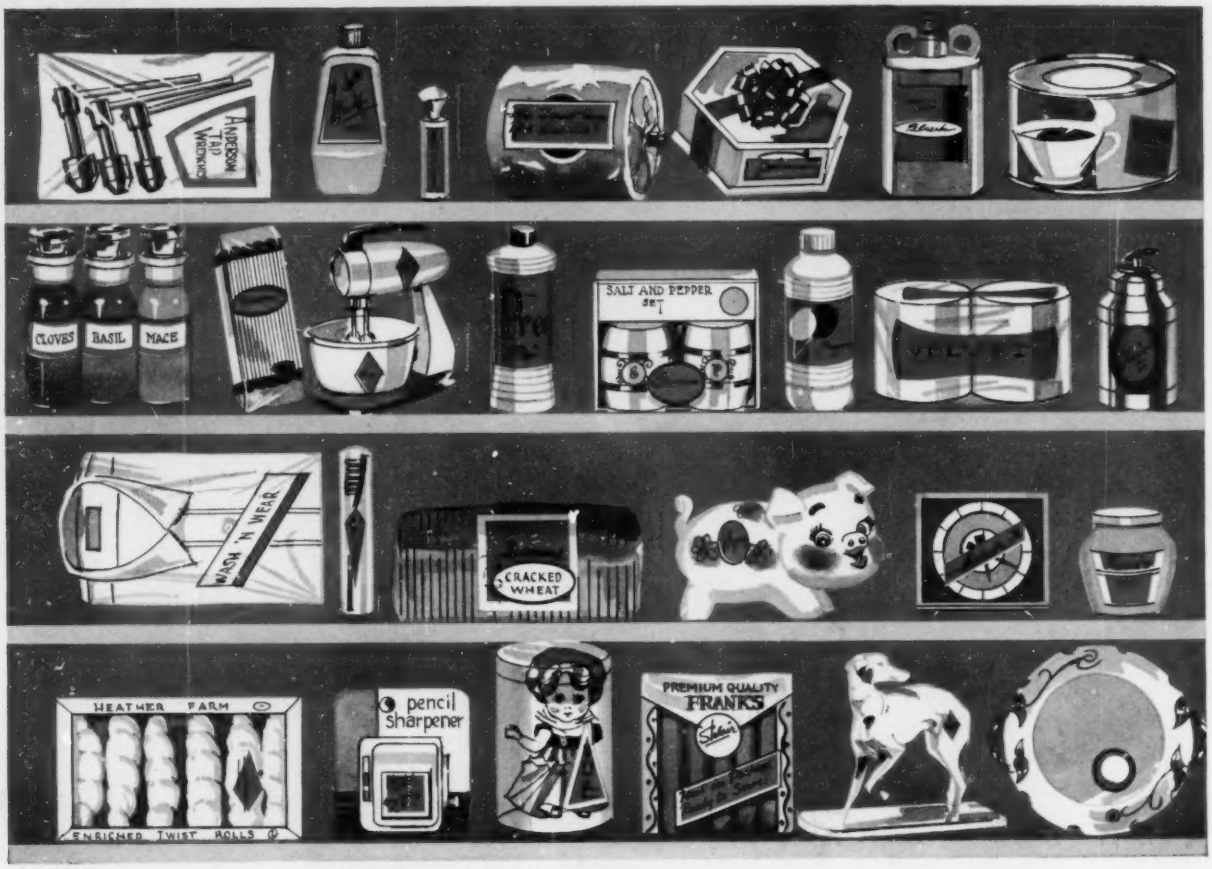
ADHESIVE STRENGTH of wax extended with 40% "Elvax" is shown by the fiber-tearing bond obtained when paper coated with "Elvax"/wax is heat-sealed to polyethylene. Coatings based on "Elvax" heat-seal to all films used in packaging today.

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

"ELVAX"
VINYL RESINS

If you can package it... Label-Aire can label it!



KLEEN-STIK® JET-ACTION LABEL-AIRE

the only *Fully Automatic* pressure-sensitive label applicator that handles all these "problem" jobs

The *world's simplest* labeling method is also the world's most versatile! New "Label-Aire" handles *any size or shape* of label on *any type* of product or package — even hard-to-label irregular shapes and delicate materials. In Label-Aire's exclusive "Jet Action", incoming air jet picks up single label from roll . . . outgoing jet expels it into exact position desired — all with amazing speed and accuracy. Mounts directly into production line from top, bottom, side, or angle. Give *your* difficult labeling operations *jet-age speed* with the Kleen-Stik "Jet-Action" Label-Aire!

- Eliminates heat, water, glue, hand labeling!
- Feeders, stackers, conveyors and other special engineering accessories available
- Manufactured and guaranteed by Kleen-Stik —pioneer and leader in pressure-sensitives
- Available on Lease — no heavy investment

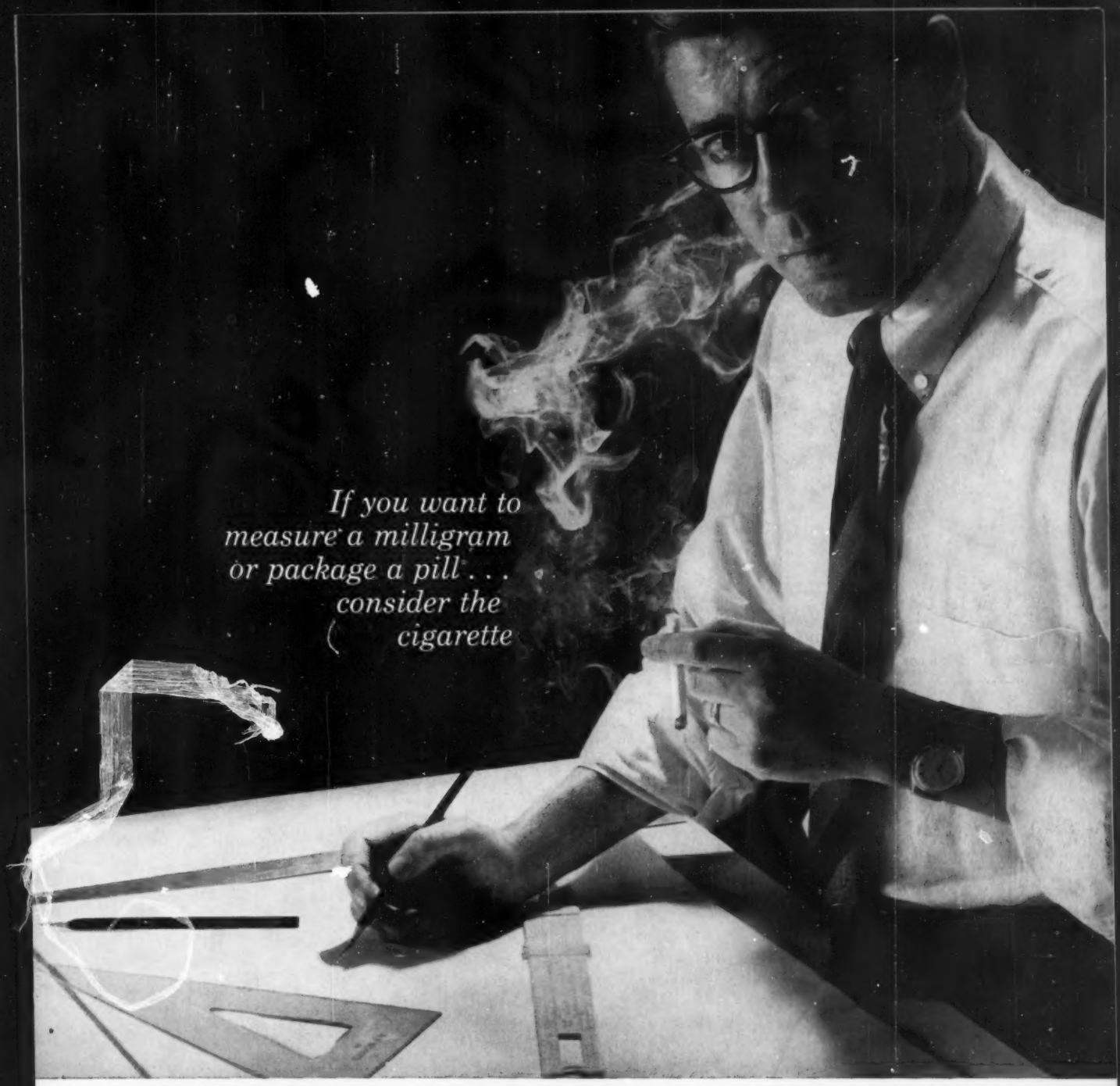
Write today for full details

PAPERS • FOILS • FILMS • TAPES

KLEEN-STIK PRODUCTS, INC.

7300 West Wilson Avenue • Chicago 31, Illinois

PLANTS IN CHICAGO, NEW YORK, LOS ANGELES, AND TORONTO, CANADA



An industry that produces and packages over 510 billion units a year obviously demands machinery of highly specialized capability.

This is the tobacco industry—and we at American Machine & Foundry Company are proud of our more than sixty years of leadership in developing the machines that help make this tremendous production possible.

But it occurs to us that these machines, with modification, may hold the solution to problems in many other industries, as well. A maker of a small packaged product, like a soap or a pharmaceutical, where accurate weight can mean the difference between profit and loss—or a manufacturer of a packed and cartoned product, may be interested in a packing machine that might be adapted to his product. A processor of a large, loose raw material may be interested in how AMF developed tobacco leaf handling and processing systems—and want to apply the same know-how to wasteful, uneconomic hand operations. The use of electronics in the control of high-speed inspection, correction and packaging may interest still another industry.

We, of course, do not know your particular problem. But our AMF research and development teams, involving highly skilled engineers, technicians and scientists throughout the world, may help you find the answer.

Tell us *your* problem. There is no obligation and your inquiry will be treated in strict confidence.

TOBACCO MACHINERY GROUP Dept. MP
AMERICAN MACHINE & FOUNDRY COMPANY
EXECUTIVE OFFICES: AMF Building, 261 Madison Avenue, New York 16, New York

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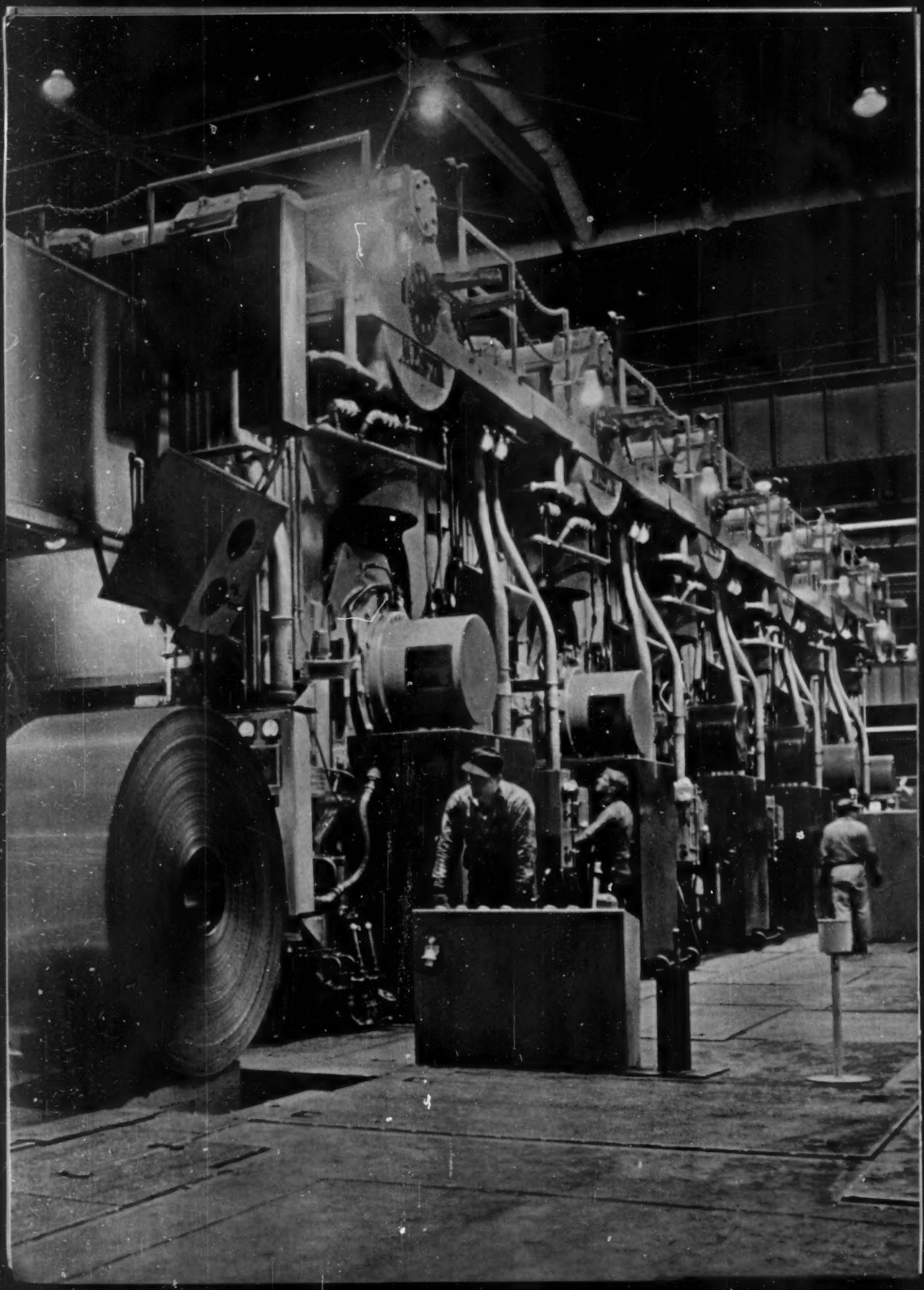
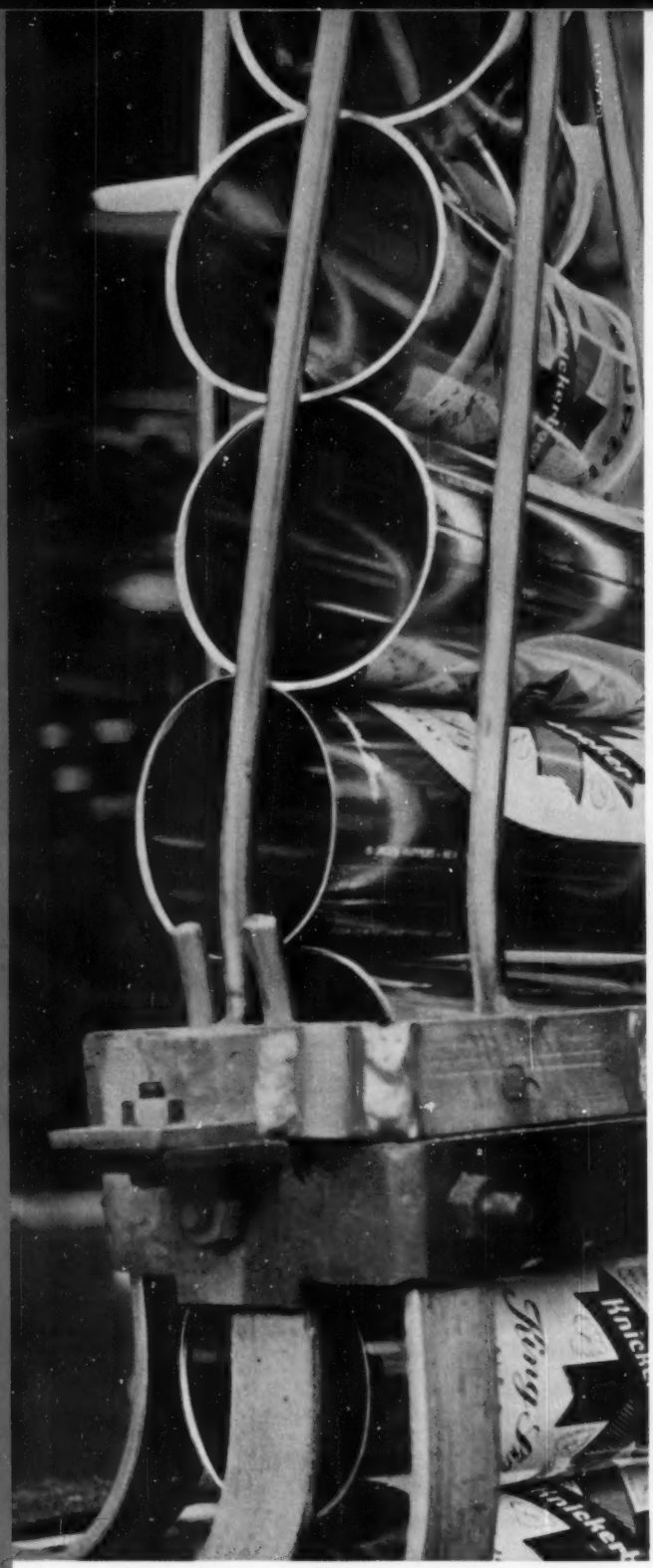




THIN

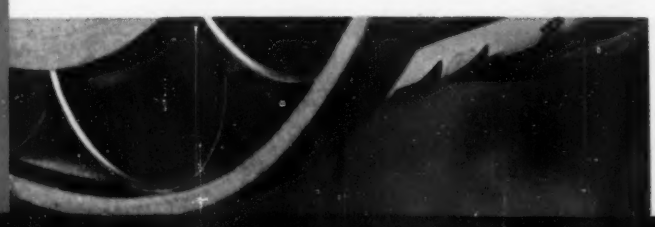
Get the strength of steel for less than the cost of aluminum with new, thinner Youngstown Tin Plate

The mill you see here is the world's first, fastest and largest Six-Stand Tandem Cold Reduction Mill. It rolls 7250 feet of 40″ wide steel sheet per minute at our Indiana Harbor Mill near Chicago—the most modern Tin Mill in the industry. This complex unit is only part of $90,000,000 we have invested since 1957 to keep pace with your demand for higher quality standards, new designs, new production techniques and new Tin Mill products.

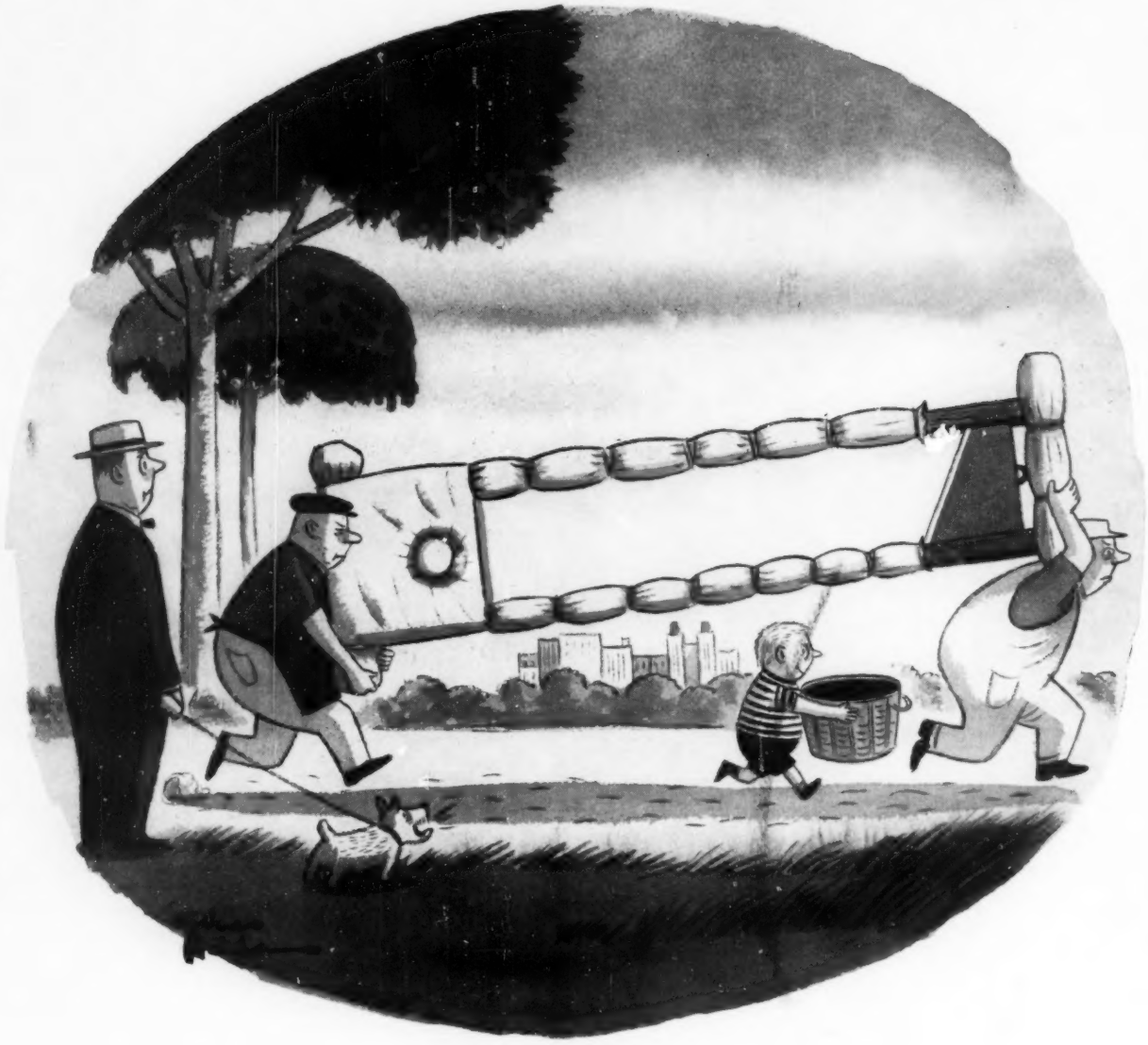
Along with thinner conventional tin plate from the new Six-Stand Mill, we are regularly producing double-reduced THINplate on our standard rolling mills. These new moves at Youngstown now provide you with lighter gauges, wider sheets, finer finishes, flatter sheets, larger coils, more uniform temper and gauge control than ever before.

Whether regular or double-reduced, get better tin plate from Youngstown—in cut lengths or coils. Electrolytic, Tin Coated Sheets or Black Plate. Pick coating weights ranging from .25 to 1.35 pound per base box. It is superior tin plate, better for a wider range of containers than any other metal, lower cost than aluminum . . . and Youngstown controlled from ore to hearth to tinning line to you.

Youngstown – growing force in steel



For full details on Youngstown tin plate, write to: Department 17-C
The Youngstown Sheet and Tube Company, Youngstown, Ohio



PACKAGING TO TURN HEADS

At KVP Sutherland we are in the business of turning heads—shoppers' heads. We do it through creative packaging for many of the nation's best-selling products. And when you put your packaging problems with KVP Sutherland, you get a complete service. A fully-staffed design department with an impressive record of award-winning designs. Technical help to show you ways to cut packaging costs. Engineering assistance to build more protection into your packaging. May we give you the full details on the ingenious ways in which KVP Sutherland can help in improving your packaging?

KVP SUTHERLAND ...the paper people

KVP SUTHERLAND PAPER COMPANY • KALAMAZOO, MICHIGAN • 18 plants in the United States and Canada to serve you

WORLD REPORT

*Digest of foreign packaging developments**

NETHERLANDS

Polypropylene milk bottle on test runs

Large dairies in the Netherlands reportedly are giving trial runs to the new polypropylene milk bottles designed by Hapos Handelsonderneming and, generally speaking, find the new containers will stand the strain of between 300 and 400 trips in comparison with 50 trips for glass bottles. At an estimated cost of 14 cents apiece for polypropylene bottles in comparison with 7 cents for glass bottles, this increased trippage represents impressive savings. According to Hapos, the cleaning of the bottles is no problem and even after many trips, adequate washing prevents all contamination. Reportedly, the new bottles can be handled on conventional European washing and capping equipment. The weight of a litre polypropylene bottle is only 60 gms. in contrast to 740 gms. for glass, an important factor to overcome objections made by the Dutch milkmen to the heavy loads that they must carry to four- and five-story flats.

GERMANY

New act regulating drug packaging

A Pharmacy and Medicines Act in West Germany brings the pharmaceutical industry under more direct Governmental packaging control, similarly to the F&DA in the United States. According to the new act, medicinal preparations can be distributed in the German market only if the package carries in clear, readable script: (1) producer's name, (2) characteristics of the product, (3) registration number, (4) contents of container in weight, volume or quantity, (5) method of administration, (6) applicability described in German language, (7) active ingredients with reference to German Pharmacoepia or by generic scientific nomenclature, (8) statement whether the preparation is available only on prescription, (9) expiration date, (10) if professional samples, clearly labeled "not for the trade."

Machine to blow mold 57-gal. containers

A huge unit capable of blow molding plastic containers of 57-gal. capacity and with a cycling rate of 100 per hour is announced as part of a machine-building program of Kautex Werke in Western Germany. The reason for semi-automatic operation is that the finished product is so large it takes a long time to cool. Automation would not be worthwhile, says the manufacturer. In the case of the big container, the cycling time is decided almost entirely by the lengthy cooling time that is required.

FRANCE

Double-wall carton for vaporizing

A package now in use in France might have possibilities for moth preparations and deodorizers. It consists of a die-cut folding carton, laminated with foil on both sides of the sheet. Each face of the carton is a double wall—the outside one solid, the inside one with die-cut areas to permit the vapors from the block of product to escape when the outer walls are open. Two die-cut tabs at the top fold upward to permit hanging in closets or cupboards, and when pulled, release the outer side walls so that package contents never have to be touched. The carton is sealed in cellophane to protect the aromatics until opened for use.

SPAIN

Expanding market for packaging

New policy of the Spanish Government to improve domestic economy was reflected in the large number of American and European suppliers of packaging materials and equipment dominating the Spanish packaging show in Barcelona, organized by the Instituto Espanol del Envase y Embalje. Reportedly, most of Spain's restrictions on imports have been removed and foreign investment is being encouraged so that Spain can build up her industries and join one of the two European trading blocs. One exhibitor described Spain as one of the most important markets at the present time for packaging equipment.

ENGLAND

Vending-machine carton for single egg

A carton to hold a single egg for automatic vending has been devised by the Paper Products Div. of Bowater Packaging, Ltd. and was shown experimentally at a recent vending exhibition in England. The idea was promoted by the British Egg Marketing Board. The carton, made of white-lined chipboard, 2¾ by 2⅞ by 4⅜ in., reportedly protects the egg against impact damage during an 8-in. drop in the machine onto a sloping metal plate and a further 6-in. steep slide to the dispenser tray. The easy-to-erect-and-fill carton is equipped with die-cut locking supports which snap into place to secure the egg and cushion it against the release mechanism of the vending operations. The carton fits the conveyor and vending mechanisms of existing milk and fruit-drink vending machines so that a column of eggs can be incorporated in a machine vending other products.

Carton top tears off to become friction lid

By making parallel scores on the inner and outer surfaces of a conventional folding-carton construction a short distance from the top to form a tear strip, the top becomes a reclosable friction cover. Because the scores on the inside are placed between those on the outside, there is no loss of compression strength as inner and outer scores are about ⅛-in. apart. The tear strip, developed by Robinson & Son, Ltd., is designed to provide easy reclosure of bag-in-carton constructions. To make a convenient opening tab, the small portion of the manufacturer's seam between the parallel scores is printed with glue-repellent ink so that the consumer can easily lift off the carton top.

Slide-on lids on aluminum pans

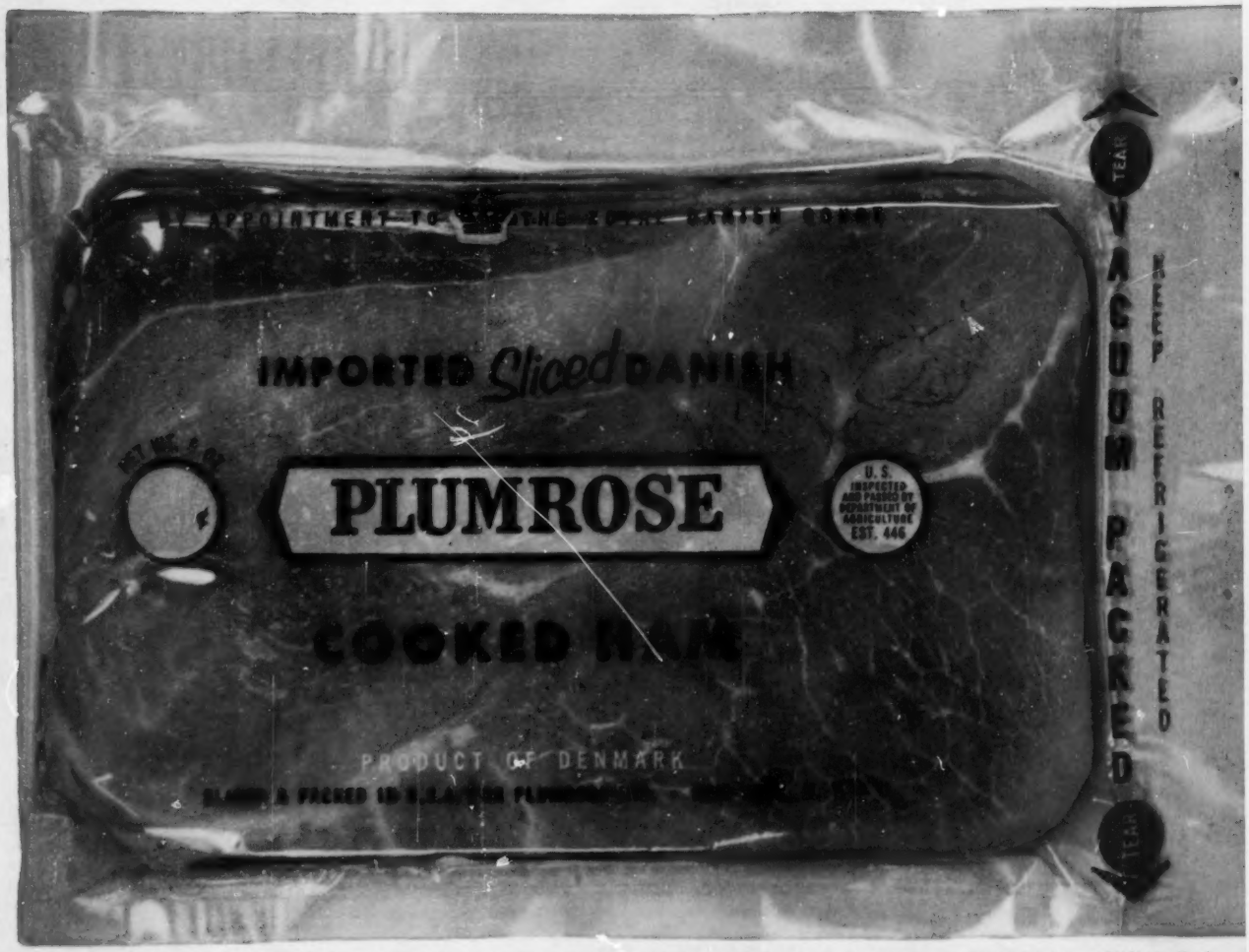
Aluminum-foil pans of the type used extensively for the packaging of prepared frozen foods are being made in England with edges flanged to take slide-on covers. The lids, developed by Cascelloid, are held in position by turning down the flanges between which they rest. The foil lids are said to be stronger for shipment and do not deteriorate in contact with gravies, fats and dressings.

*For additional information, write: World Report Editor, MODERN PACKAGING, 770 Lexington Ave., New York 21.

Plumrose Danish Ham slices are packaged to sell . . . packaged to stay fresh and pure. A special feature of the polymer coated polyester vacuum pouch pack is the extrusion coating of Monsanto Polyethylene 406. MPE 406 adds a barrier to gas permeation and offers excellent heat seal response during packaging.

MPE 406 was chosen as a coating by the package maker, Flexible Packaging Division of Standard Packaging Corporation, for these reasons—its excellent adhesion to polymer coated polyester film . . . superior coating uniformity . . . freedom from odor . . . and high clarity. Monsanto Polyethylene 406 also meets FDA specifications for food contact use.

For more information on Monsanto Polyethylene extrusion coating resins, write to Monsanto Chemical Company, Plastics Division, Springfield 2, Massachusetts.



Importer: Plumrose, Inc., New York, N. Y. • Package Manufacturer: Standard Packaging Corp., Flexible Packaging Division, Clifton, N. J.

MONSANTO INNOVATOR IN PLASTICS

Monsanto

SEALED-IN SUCCULENCE WITH MONSANTO POLYETHYLENE 406

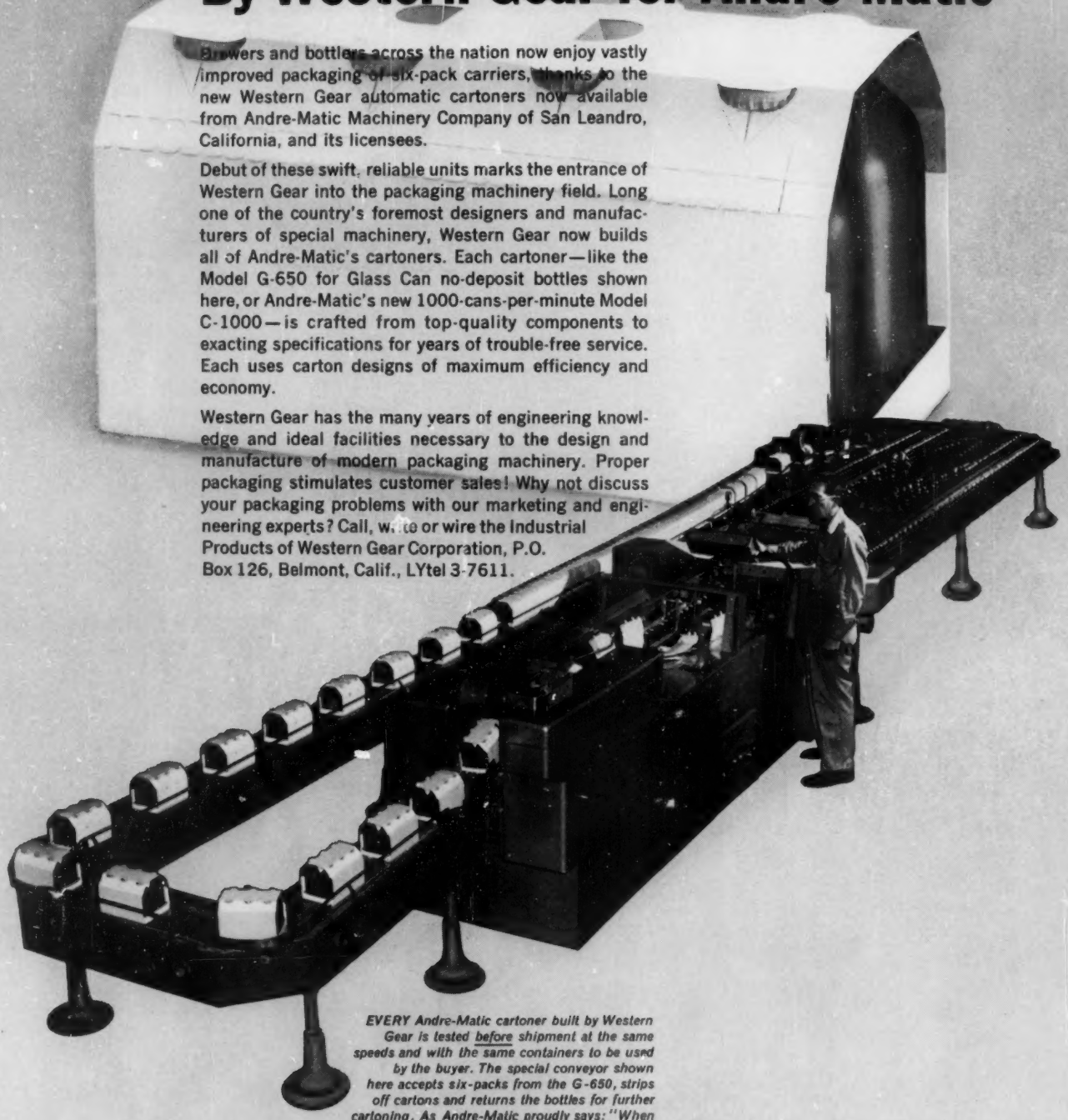
HOW WESTERN GEAR SERVES THE PACKAGING INDUSTRY

Now: BETTER BEVERAGE PACKAGING By Western Gear for Andre-Matic

Brewers and bottlers across the nation now enjoy vastly improved packaging of six-pack carriers, thanks to the new Western Gear automatic cartoners now available from Andre-Matic Machinery Company of San Leandro, California, and its licensees.

Debut of these swift, reliable units marks the entrance of Western Gear into the packaging machinery field. Long one of the country's foremost designers and manufacturers of special machinery, Western Gear now builds all of Andre-Matic's cartoners. Each cartoner—like the Model G-650 for Glass Can no-deposit bottles shown here, or Andre-Matic's new 1000-cans-per-minute Model C-1000—is crafted from top-quality components to exacting specifications for years of trouble-free service. Each uses carton designs of maximum efficiency and economy.

Western Gear has the many years of engineering knowledge and ideal facilities necessary to the design and manufacture of modern packaging machinery. Proper packaging stimulates customer sales! Why not discuss your packaging problems with our marketing and engineering experts? Call, write or wire the Industrial Products of Western Gear Corporation, P.O. Box 126, Belmont, Calif., LYtel 3-7611.



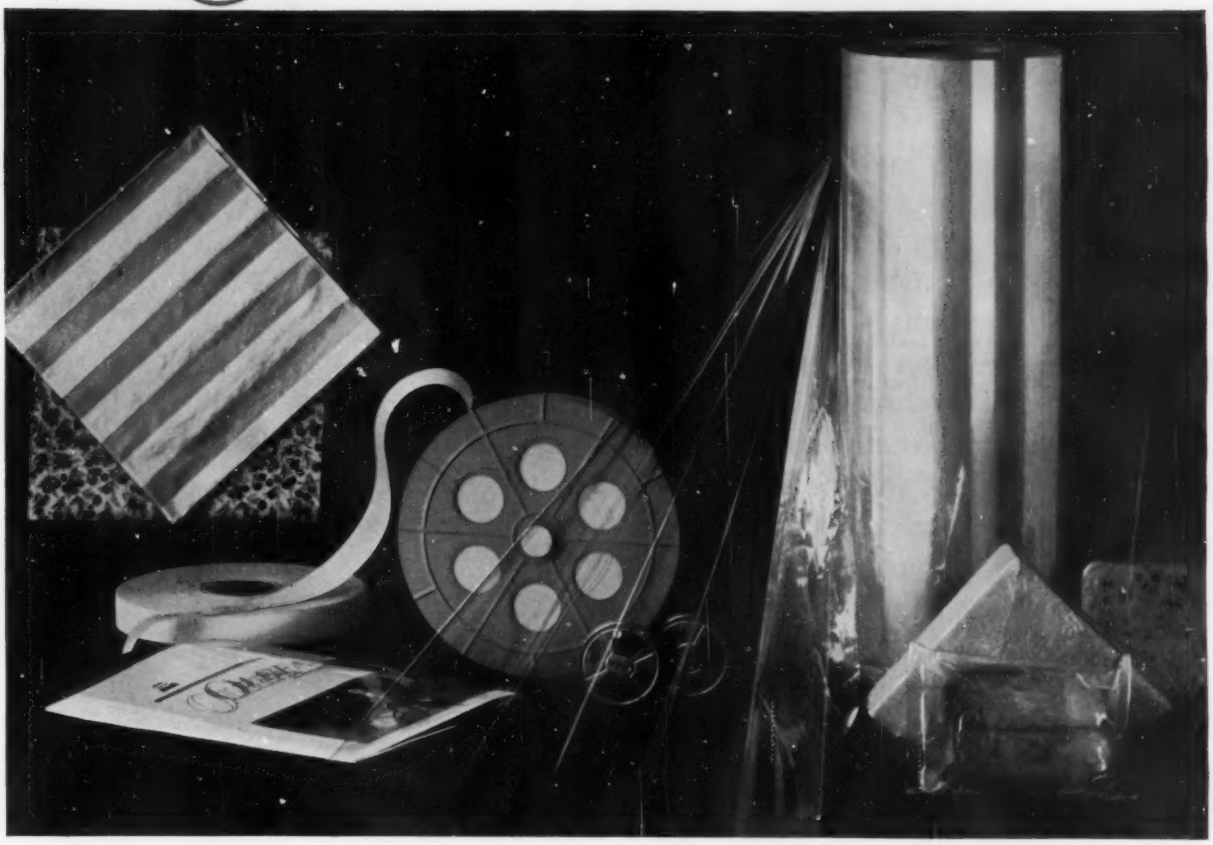
EVERY Andre-Matic cartoner built by Western Gear is tested before shipment at the same speeds and with the same containers to be used by the buyer. The special conveyor shown here accepts six-packs from the G-650, strips off cartons and returns the bottles for further cartoning. As Andre-Matic proudly says: "When one of our cartoners arrives, all the customer has to do is install it and push the button."

WG INDUSTRIAL PRODUCTS DIVISION

Copyright 1961 Western Gear Corporation

AVISUN announces

OLEFANE*-U



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EDITORIAL MEMO

Season of decision in packaging

Within the next six weeks, packagers will be exposed to two national events so important that they may affect their planning for years to come.

The Packaging Institute's 23rd Annual Forum (New York, Oct. 18-20) comes at a particularly critical time, when all of packaging is under an unreasoned but nevertheless dangerous attack by newspapers and consumer organs as a result of the one-sided testimony given in Senate hearings at the end of June. Senator Philip A. Hart, presiding over these Senate subcommittee hearings on "deceptive packaging," will be the luncheon speaker on October 19. It is likely that a PI statement and recommendation on this subject will be available by the time the Forum opens.

Less than three weeks later (Detroit, Nov. 7-10), the Packaging Machinery Mfrs. Institute will unwrap the fourth edition of its biennial Packaging Machinery Show, backing it up, this time, with two days of conferences directed—as is the show—to the special interests of packaging production people. The Machinery Show, once regarded as unnecessary, has won a real place for itself. Many of the same people who attended the AMA Packaging Show in Chicago in April will find it advisable to look in on this specialized show. Machinery manufacturers who found it difficult to show something new every year now cycle announcements of their most important developments to coincide with the every-other-year Machinery Show.

This magazine will be the first to concede that the printed word is no adequate substitute for personal attendance at such meetings and shows. However, for the benefit of those who cannot attend (and, equally important, as a check-up and reminder for those who do attend), this magazine will do its utmost to provide (1) an advance analysis and guide and (2) a complete, authoritative report after the event.

This issue contains (pp. 122-123) our advance story on the Packaging Institute Forum program. (For background, see also the latest developments in Washington's "deceptive packaging" drive, pp. 112-113.)

The November issue, timed just in advance of the PMMI Machinery Show, will have the deepest and broadest coverage in our history on machinery and production developments, together with a detailed advance story on the Detroit exhibits.

December will bring an on-the-scene report from seven MODERN PACKAGING editors assigned to the Machinery Show. In addition, the December issue will contain our full report on the Packaging Institute proceedings.

And—for an added bonus—see the Special Editorial Report inserted under the front cover of this issue on American interests in the International Packaging Exhibition in London. We sent our editors to London to get this very timely report for you, published only two weeks after its close.

The Editors

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MODERN PACKAGING
OCTOBER 1961 Vol. 35 No. 2 / THE COMPLETE AUTHORITY OF PACKAGING

PHOTO COURTESY U. S. TESTING CO.

Commuter terminals *are being used to obtain cross-section consumer opinions on packaging quickly. At this testing center in New York's Port of Authority Bus Terminal, male commuters are being asked if they use a hair dressing. Those who say "Yes" are invited to take a visual instrument preference test in room at the left.*

Piloting the test market

There's much to be learned by observing established ground rules for consumer and market research procedures to minimize the risks and to avoid the pitfalls in launching a new package

It is estimated that American manufacturers during 1961 will have spent $1,250,000,000 to market test new products and packages.* In spite of this staggering expenditure, between 80 and 90% of new products in all fields will have failed to reach the marketing stage or will be unsuccessful once on the market, according to averages which have been compiled by the New York Sales Executives Club. Among the reasons given are:

- Failure to pin down research objectives.
- Inadequate laboratory research and consumer

*Joseph Kaselow, N.Y. Herald Tribune, Feb. 14, 1961.

research in order to eliminate inefficient packaging.

- Unfortunate timing of market tests or market-test periods of too short duration.
- Even more critical—insufficient programming to obtain "feed-back" data during and after the market tests to evaluate results.

On the basis of several hundred studies of successful and unsuccessful product introductions, Audits & Surveys Co. has seen poor research keep good packages from reaching the market and let "dogs" be brought out nationally.

Selling Research, Inc., another firm that audits retail sales, says it has seen store tests reveal a bleach that corroded in the package, a cosmetic that solidified in the bottom of the bottle, a glue that would not stay in the tube and an instant food that would not pour out of the container.

What is today's best answer to these problems?

Packagers agree there is no sure way to eliminate entirely the frenzied anxiety that accompanies the launching of any new package. But consumer research and market testing are no longer luxuries. Advanced new techniques that take into account all the psychological aspects of human behavior and buying habits in the changing merchandising climate are a necessity today before large investment can be ventured to schedule full-scale production and distribution. And ground rules are becoming so definitive that moves toward the objective can be made with the cool calculation of a chess game. Much is to be learned, therefore, by observing successful new procedures that now prevail to minimize the risks and to avoid the pitfalls.

For discussion, the steps now being favored for package testing may be divided into four stages:

1. Pre-research—laboratory and design development to select an efficient package.
2. Consumer research to obtain significant opinions concerning the package, its convenience in use and its appearance.
3. Market tests to measure actual sales in test areas as a yardstick for what may be expected when the package is introduced nationally.
4. "Feed-back" research based on consumer opinions and reaction after the package has been purchased, used and re-purchased.

According to today's thinking, a project must begin in the laboratory, where the type of package to be used must be decided, and in the design studio, where its appearance must be planned. Sometimes the project concerns a new package for a new product. Sometimes it involves an improved package construction for an existing product. Sometimes it is a question only of surface design. But whatever it is, before investment is made by a company in full-scale production, some judgment must be obtained as to probable acceptance.

Consumer research

The usual way to start is by collecting consumer opinions. And while there is endless variance among researchers as to the techniques, involving much

PHOTO COURTESY AUDITS & SURVEYS CO.

Store audits of sales *are the essence of market-test procedure. Here, researcher checks stock of canned beef-stew brands in a delicatessen. The test market must have a diversity of retail outlets approximating national retail conditions.*

Feed-back data *during market tests prompted Johnson & Johnson to discard carton on Micrin bottle when it was found that a view of the handsome bottle sold the product faster. Same kind of follow-up research decided Johnson & Johnson to change name and package from "Cough Medicine for Children" to "Arrestin Cough Medicine," now promoted for family use.*

TRIED **ADOPTED**

argument about the physchological principles of motivation to produce the right answers, the start-off may be as simple as showing mock-up dummies or artist's drawings of a new package to a screened group of consumers. Johnson & Johnson, for example, initiated preference study for its highly successful new plastic dental-floss package by stationing interviewers, equipped with sketches, in drug stores to find out from acknowledged dental-floss users which of two packages was liked best. Preference for one shape justified venturing pilot samples made in a single-cavity mold for market tests.

On the other hand, in some new-product tests, for security reasons or for lack of facilities to produce test packages, a package construction entirely different from the final one may be used, omitting the real brand name or using a fictitious one. In early consumer tests for its new dry soup mixes, now in aluminum cans with tear-off lids,† Campbell Soup Co. used foil-laminated envelopes and dodged the use of the Campbell name by testing under "Franco American" and "Camden." Much of the product testing, too, was done in Belgium—not for security reasons, says Campbell, but because wider acceptance of dry soup mixes in Europe offered better opportunity to obtain representative user panels. Later Campbell decided it wanted a sturdier rigid container to distinguish the new dry soup mixes as a quality line and to make sure sharp-edged ingredients would not pierce container walls and break the seal. After selection of the hermetically sealed drawn aluminum can with easy-opening tear tab, literally thousands more consumer judgments were obtained, according to W. B. Murphy, Campbell's president, before the company was ready to risk its multi-million-dollar investment in new processes and special packaging facilities.

Most companies would prefer to keep their tests secret, but almost all agree it's futile. Large firms have pipelines flowing continually from their salesmen. Many supplying industries are also involved. And it takes only one chance interviewer call on the wife or relative of a competing company employee to spill the secret.

Consumer tests are run in a variety of ways. Some companies develop their own panel lists. Some depend on advertising agencies for satisfactory panel testing. Others employ independent research organizations to screen the panel to specifications. Often a firm employs a combination of all these facilities to obtain reliable answers. Campbell Soup used a number of these sources to test dry soup mixes, having conducted its first tests on such products as early as 1943.

Experienced research organizations have such broad coverage that they can screen respondents as definitely as users of hair coloring by age groups and if they use tints or permanent dyes. These

† See "Campbell's Soup in Aluminum," MODERN PACKAGING, Sept., 1961, p. 129.

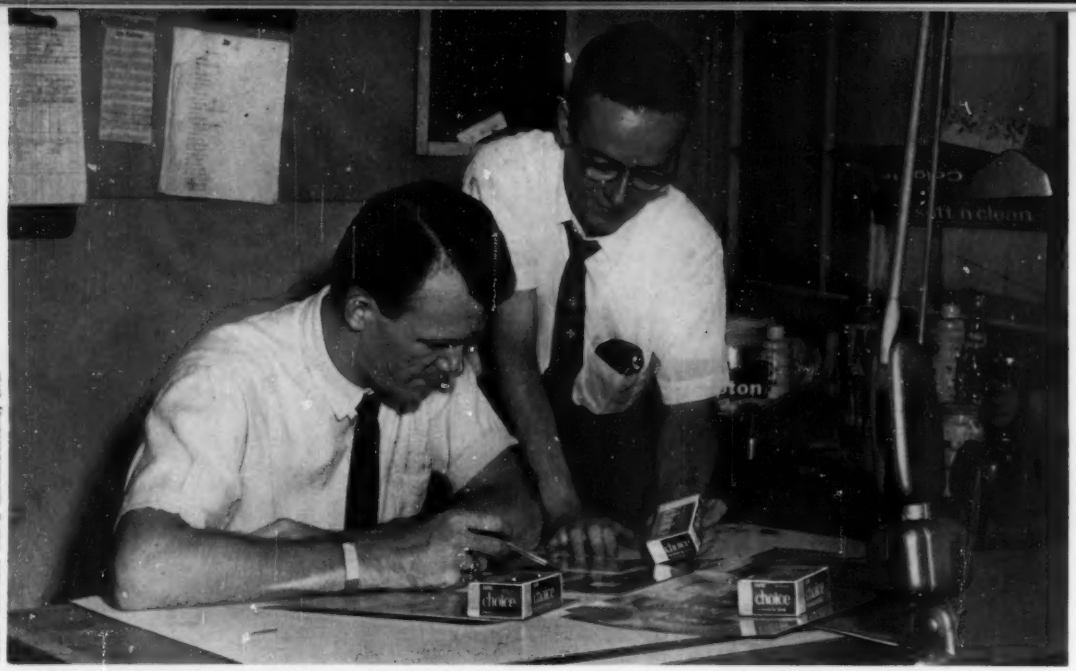


PHOTO COURTESY BOX-B REPRODUCTIONS, INC.

Sample preview packages *can now be made in quantity by silk-screen process at fraction of the cost of art facsimilies. Sample makers are checking packages made for consumer test of Choice brand soap.*

firms are equipped to obtain the information by personal interview in homes or selected locations (parking lots, stores and supermarkets), by telephone or mail, and in any section of the country, depending on the problem.

Several consumer-research organizations recently have developed facilities for gathering data and carrying on visual tests in transportation terminals. U. S. Testing Co. operates a permanent testing center in the New York Port of Authority Bus Terminal, where it gathers opinions from a constant flow of commuters and other travelers.

Adequate package testing requires preview sample packages in quantity. Where to get them is a question that must be answered at the start of any program. To make art facsimiles is extremely costly. Furthermore, these are apt not to look like production packages. Today there are firms which specialize in making printed samples that are difficult to distinguish from the finished article. By the use of special silk-screen processes, the real thing can be produced in quantity at a fraction of the cost of one comprehensive art dummy, including die cutting, full-color printing and embossing. And the samples can be produced overnight when time is of the essence. Designs silk screened on transparent film applied to plastic and glass bottles simulate actual applied-color labeling.

On occasion, a sufficient number of preview samples have been made and filled to meet the requirements of a full market test, although this test procedure is not considered usual.

What the pilot study is to production, the test market is to the selling program. It means putting the package on sale in limited, carefully selected areas to reduce the risks if and when the package is sold nationally. It is the proving ground for the unpredictable. Test markets are costly (some authorities estimate $50,000 to $100,000 per city), but they are the place to discover mistakes and correct them before it's too late.

Selecting the test markets

Much has been written about factors to be considered in the selection of test markets:

- Good average cross-section of the population.
- Good advertising media available.
- Diversified industry to provide a sampling of all income groups and cultural levels.
- An area independent of other big cities.
- Diversity of retail outlets approximating those of national retail conditions.

Since reactions to some packaged products may differ across the country, tests are often run in four scattered areas. New England is generally recognized as slowest to react to a new product or idea; California, the quickest.

Several cities have become favorites for test marketing because they are reputed to have an unusually good cross-section of income levels, nationalities, races, etc. Among these are Syracuse, Providence, Peoria, Columbus and Grand Rapids. However, box scores of test cities reveal dozens of others that may be used satisfactorily. And test marketers are constantly searching for "unexploited" areas which they hope have not been discovered by

their competitors, where they may have a chance of keeping a market test secret.

Additional factors enter into selections. Test markets are often chosen because a company has good distribution in a particular area, has close control over inventories, or can count on helpful cooperation of dominating chains. A & P in the grocery field and F. W. Woolworth in the variety-store field reportedly will not cooperate with any organization on store audit tests in any market. Some local chains also restrict otherwise good test markets. And product requirements may limit test areas. Packagers testing soaps and detergents sometimes prefer the testing to be done in hard-water areas.

Frequency of purchase is the chief factor determining the length of a test. A cigarette manufacturer may get significant results on a new package in a month. Furniture polish might take a year. The packager of a cold remedy must get results during the winter season; the maker of sunburn preparations, during the summer or in sunny climates.

Generally a market-test operation runs at least six months. But again this depends on the product. The main thing, say all packagers, is to continue until there is no longer any room for doubt.

Test markets may be tricky in many respects. The Borden Co. struck a snag when a price rise on cottage cheese confused results in areas where it was testing new containers. Sometimes a competitor can upset a market test by introducing a deal or an extra-rich premium. Some companies have even been known to enter a competitor's test markets with hurriedly copied packages.

Nor is it sound logic to expect exactly the same results nationally as found in the test markets, say those who have had experience. Economic conditions may change between test marketing and the national program; competition may have been able to catch up; distribution may be lacking.

Market tests provide the time to iron out packaging problems before the start of volume production. Bristol Myers had time to solve mechanical problems with its roll-on Ban antiperspirant. Lever Brothers had time to engineer volume packaging of Stripe toothpaste. John H. Breck Co. had time to change a copy theme on a permanent-wave package.

'Feed back' mechanism

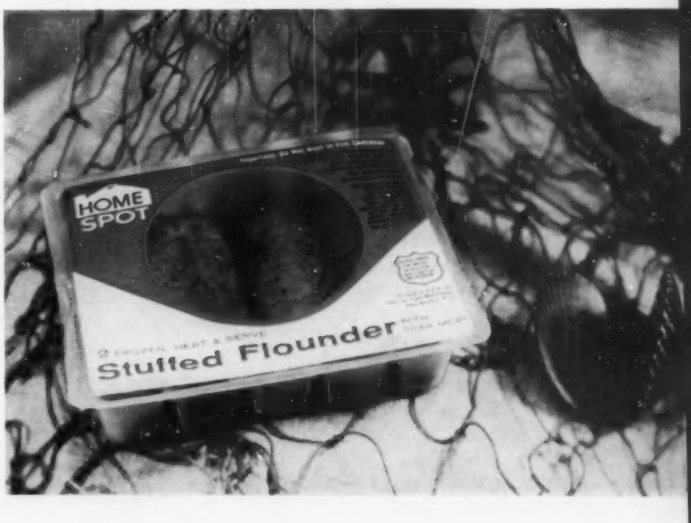
The crucial phase of any market-test program is the designing of continuing research after the introduction to feed back customer reactions. Here is the opportunity to find out from retailers and known purchasers why they bought, why they came back for more or why they didn't. It is this kind of feedback data that prompted:

Johnson & Johnson to discard the carton on its Micrin Oral Antiseptic and let the handsome bottle with the cool blue liquid showing through sell itself. Sales tests in two controlled areas with and without the carton corroborated the decision. Result: sales far exceeding forecasts.

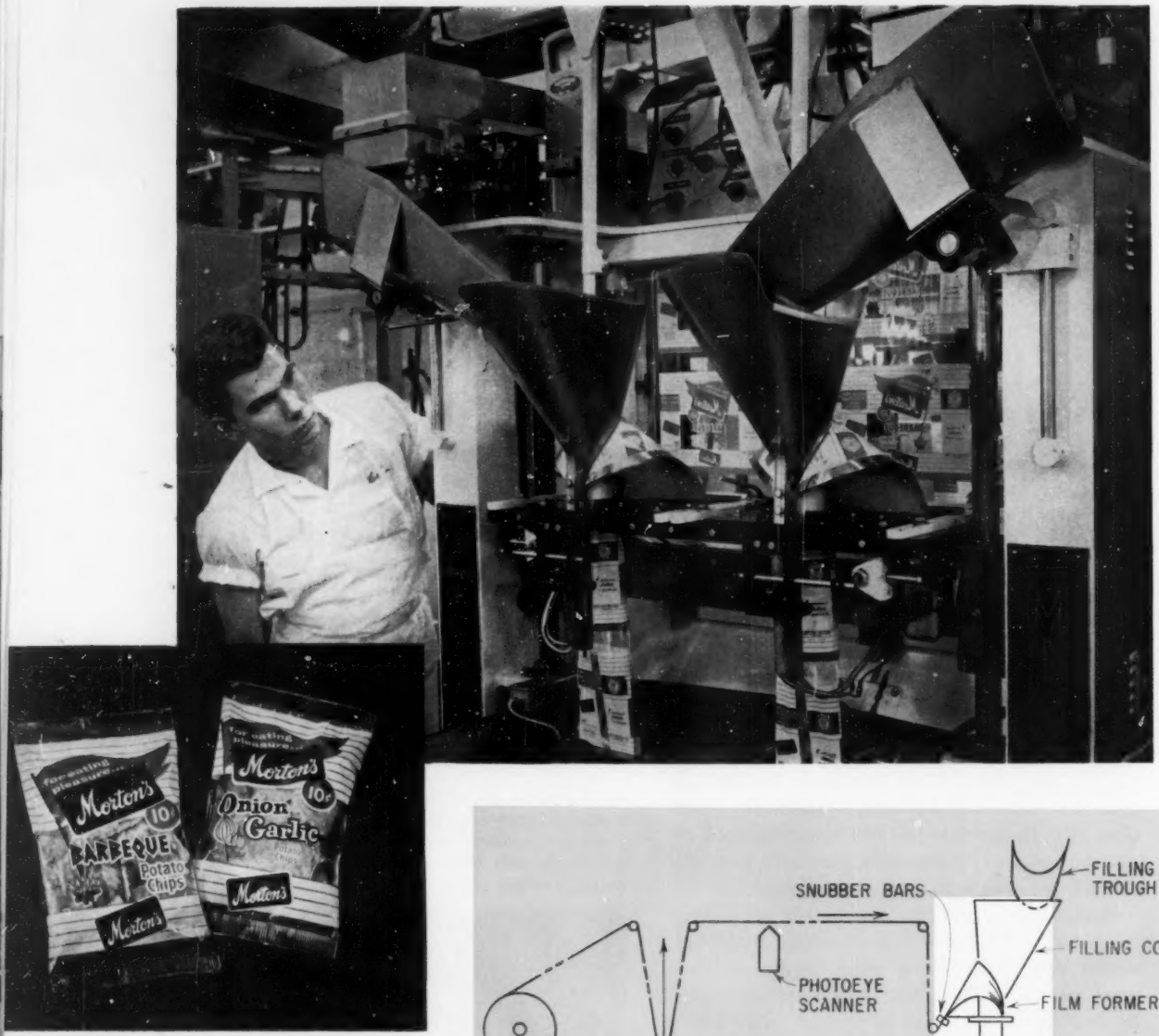
Johnson & Johnson to change the name and package for a product originally introduced as Johnson & Johnson's Cough Medicine for Children to Arrestin Cough Medicine, now promoted as a cough medicine for the whole family and enjoying sales of this broader market. [*Continued on page 245*]

Redesigned Fab *package (right) replaces metallic gold and former laminated-foil carton because follow-up research revealed consumers felt luxurious carton was "too high toned" and thus they did not regard product as a heavy-duty detergent. Graphic design of washing-machine dial now emphasizes heavy-duty usage.*

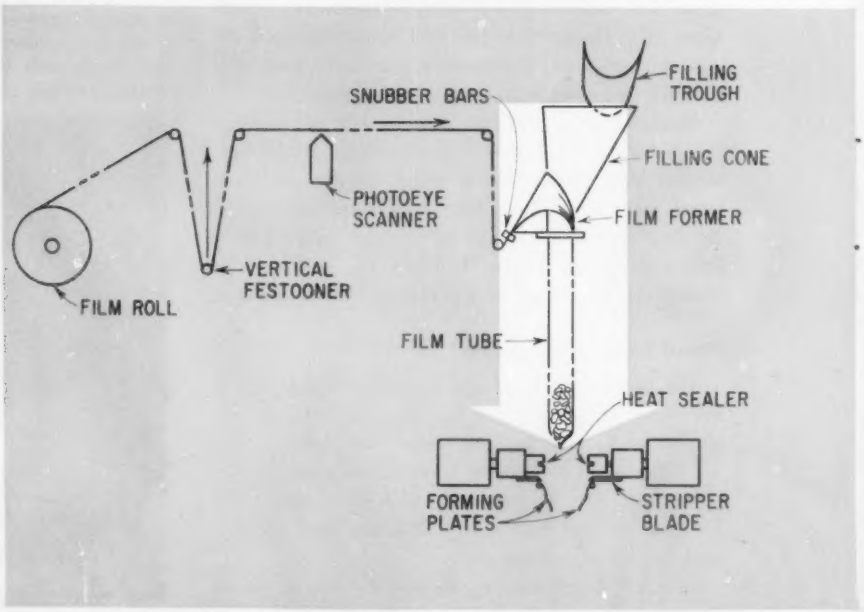
Acceptance of window lids *for new Home Spot prepared frozen seafoods was market tested in several dozen independent stores and supermarkets in Philadelphia-New Jersey area, where sales and consumer follow-up could be closely observed by the company's sales forces.*



NEW PRINCIPLE IN



Unique action *in new pouch packer utilizes movable forming head (center in top photo) that literally wraps film around product while the heat sealers directly below remain stationary. Result is said to be more even seams in the packages (inset photo) and a minimum of film stress.*



POUCH PACKAGING

In Morton's new twin-head machine, the film formers move and the heat sealers are stationary; a special feed and cone filler efficiently handle an awkward and fragile product

Pouch packaging of irregularly shaped, hard-to-feed products is reportedly made more efficient at Morton Foods, Dallas, by a new form-fill-seal machine that employs unusual mechanical actions.

Reversing the system used in most pouch-packing equipment, Morton's twin-head machine has *movable* film-forming sections and *stationary* heat sealers. This combination relieves tension on the film, thus preventing stress marks in the final package and better preserving the barrier properties.

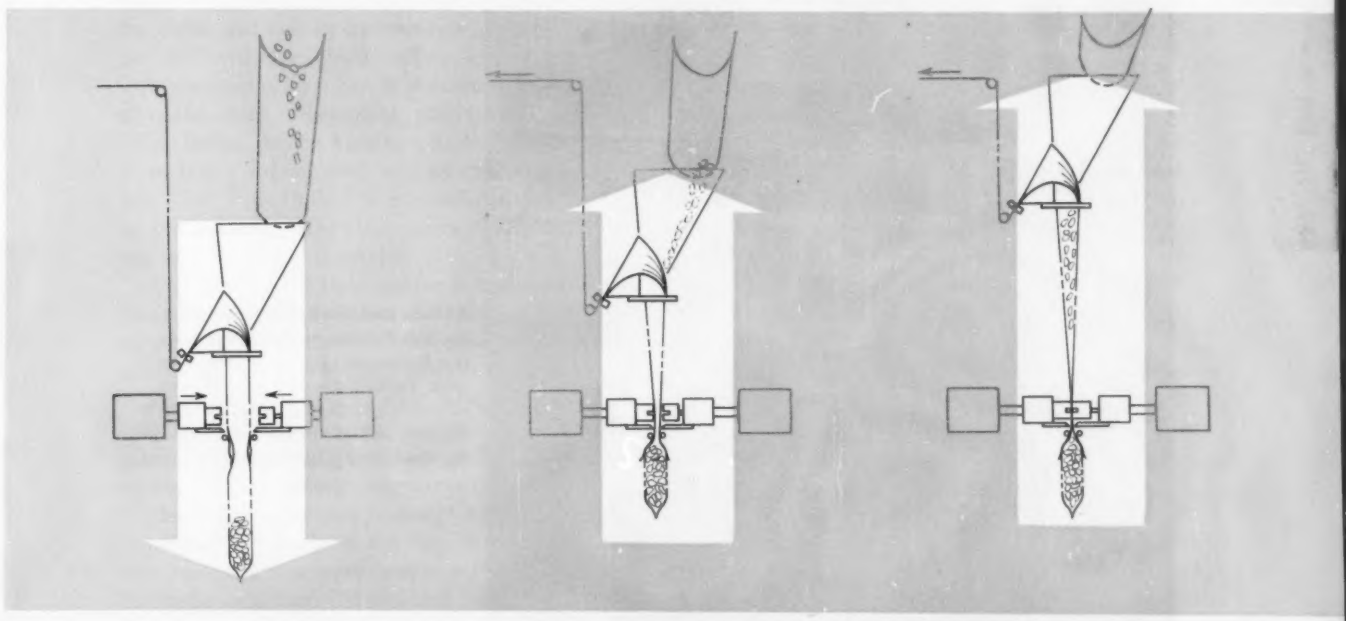
Also, a special trough feed and filling cone together minimize "bridging" and enable such difficult-to-handle products as potato chips to be rapidly and gently loaded into the pouch as it is being formed at speeds up to 60 units per minute.

At Morton Foods (600 employees, $15,000,000 sales), the new unit is used for onion-garlic and barbecue potato chips pouch packaged in a single web of printed No. 450 polymer-coated cellophane. Five pouch sizes, ranging from 4¼ by 6½ in. to 7¼ by 12⅝ in., are accommodated on the machine, which can be quickly changed over for either size.

In operation, each of the two heads is fed cellophane metered from separate rolls onto separate roller systems that "store" the material under low tension for the pouch-forming operation. Each film web is then formed into a continuous tube by a shoulder-type former, which is raised by a mechanical device while the previously formed film tube is held by the stationary heat sealer.

The conventional internal tube, around which the film is generally formed, is replaced in this machine

Sequence of motion *in machine starts with film former in top position (far left). As former drops, film tube is lowered through the heat sealer. On the up cycle, forming plates shape the pouch and, as the heat sealers complete the pouch, more film is stripped from the roll and shaped into a tube as the product is introduced in the package (right).*



by the shoulder former and the special filling cone or funnel, which stortens filling distance in this machine over that of conventional pouch packers.

Introduced into the package by a vibrating conveyor, the light and fragile potato chips travel via two more vibratory feeders through the sensitive weighing hopper to a pivoted loading trough. This trough's discharge end rests on the filling cone.

Heat-sealing system

At the start of the packaging action, the film-forming head is in top position, with the feed-trough level. The head then drops to the bottom position, which also drops a filled bag well through the heat sealers. Special snubber bars on the film web prevent it from reversing. As the film-forming head starts its upward stroke, shaping plates under the heat sealer engage the film tube, squaring up the top of the package and preventing creases and wrinkles from developing during the sealing operation.

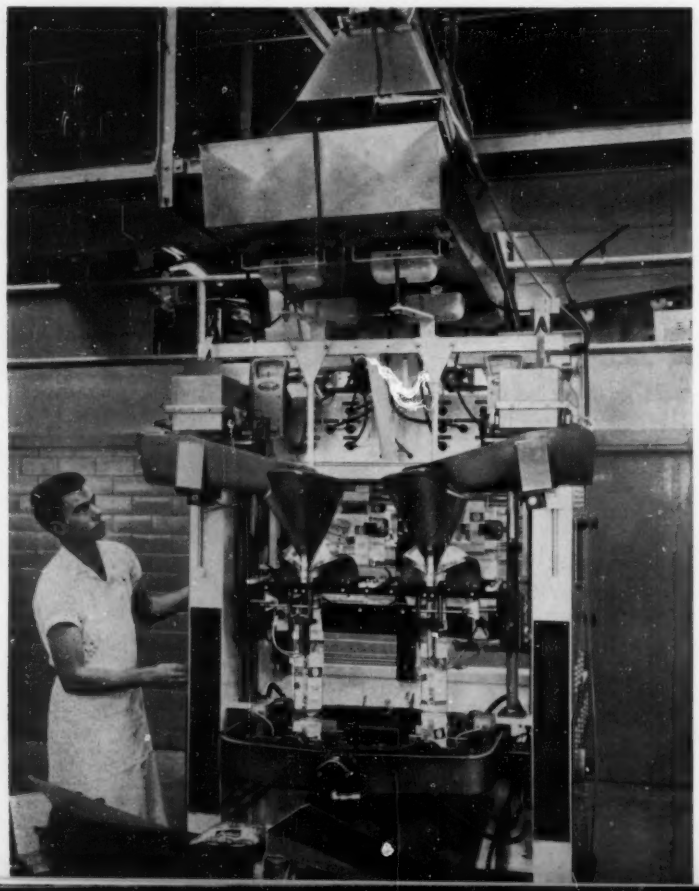
Part way through this cycle, the heat-seal jaws close to complete the filled package and form the bottom seal on the next pouch. The snubber bars open, allowing the moving forming head to strip film from the supply rolls. At this point, too, product flows from the weighing hopper down the feed trough and through the cone into the film tube. This trough and cone are so constructed that the product is introduced in a spiral path, which facilitates loading and prevents product clogging at the mouth of the pouch. This procedure, according to supplier engineers, also minimizes breakage, since the potato chips slide, rather than drop, into the pouch.

Normally, the length of the sealed pouch is controlled mechanically by the stroke of the film-forming section. However, where intricate package designs necessitate extra-fine control, a photo-eye is connected to the control system, which utilizes a printed registration mark on the film to insure proper registration of the design.

The mechanical system used in this machine is particularly noteworthy because of the short distance that is utilized from the weighing device to the pouch and because of its simplicity and freedom from product-catching corners.

With these advantages, the unit should be of interest to a wide range of packagers handling either fragile or awkwardly shaped products. The machine can be adapted to make either single or duplex pouches and will also handle other types of packaging films and heat-sealing papers.

SUPPLIES AND SERVICES: "Series 9,000 Mira-Wrap" form-fill-seal machine by Mira-Pak, 7000 Ardmore St., Houston 21.

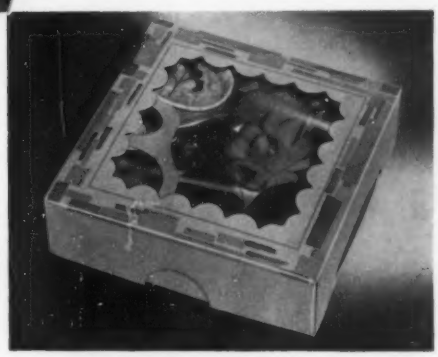


At top position, *filling cones on the film-forming heads hold troughs in a horizontal position. As the heads drop, product flows by gravity from vibratory chutes (top) through weight hoppers and into the film package via the now-tilted filling troughs.*

Upgrading the sky lunch

American Airlines' smart new container for meals shows how design ingenuity can improve appearance and convenience for little extra

Tapered sides *of appealing aqua-and-white box provide convenient shape for use as tray on passenger's lap. Cover may be telescoped under base when meal is served. Die-cut openings in platform hold coffee cup and cream container.*



Old box *lacked individuality and up-to-date appearance which are considered appropriate to quality appointments of American Airlines.*

Put the proper push behind something to jolt the status quo and an impressively improved package, well within specified budgets, can often result.

A noteworthy example is the smart taper-sided, aqua-and-white, telescoping folding box for its "Flite Buffet," which American Airlines has adopted to replace a former drab and uninteresting square box. The "Flite Buffet" is a complimentary service on the airline's piston-plane coach flights which do not include hot-meal service.

An official of the line, making a flight on one of these planes, was served one of the former packaged meals. "It looks terrible," he reported to home office. "We need something modern, up-to-date."

That was all it took to start things moving. The supplier of the box, in cooperation with airline personnel, began working on designs and constructions to improve the package appearance.

The first decision was to design a box with tapering sides. This would be not only more attractive, it was reasoned, but more convenient for passengers to handle as a tray. But it would take more board. The cost problem, however, has been partially offset by eliminating a former transparent window, which served no functional purpose, and replacing it with modern script lettering and stylized silhouette of a knife, fork and spoon on the cover. A printed motif of scallops around box cover and base, contrasting with the bright white surface of the bleached sulfite board, creates the illusion of clean white table linen.

A pleasing shade of aqua for the one-color printing, replacing the dismal blue on the old box, gives the new box a sophisticated, modern look. American Airlines trademark and logotype on the cover immediately identify the package with the airline.

The boxes are shipped flat to the airline catering services which fill and pack them along with dry ice in corrugated boxes for storage on shelves in the rear of the plane. And at a cost only slightly greater than that of the previous packaging, American Airlines can serve a complimentary meal that, it feels, measures up to its standards of stewardship.

SUPPLIES AND SERVICES: Box by Downingtown Paper Co., Downingtown, Pa.

Rinso Blue in a

An idea that created a stir of interest four years ago* has been revived under impressive sponsorship and represents a new entry in the competition between major soap companies to find new and different convenience packaging for dry detergents.

Lever Brothers is test marketing Rinso Blue, a heavy-duty blue detergent, in the self-metering carton with a built-in device that "pours . . . stops . . . measures by itself," to dispense the exact amount of detergent needed for a washer load.

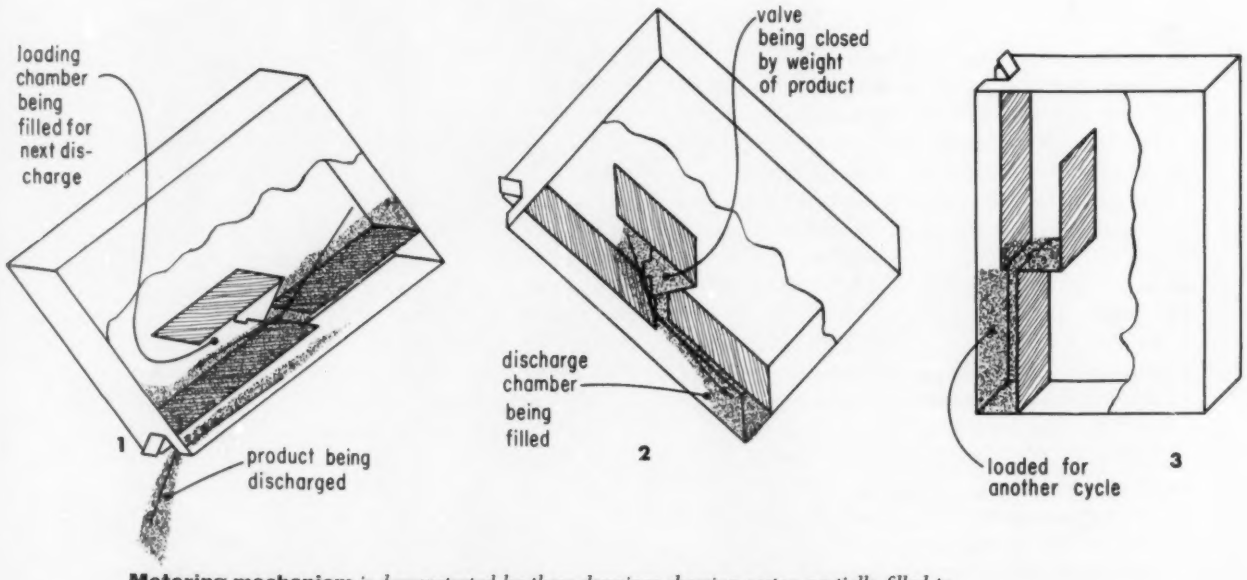
The self-metering carton, called "Measure-Matic," appears to have certain advantages over detergent tablets and dissolving packets, which are the pre-measured convenience forms being used for other Lever products and by competitors. It dispenses in the way that women have been accustomed to pour laundry powders for years and the directions for use are simple. And since not all laundering loads are "average," it has the added feature of permitting greater or lesser amounts to be poured from the same opening when needed for varying soil conditions. This does not affect the pre-measured amount for the next use, because the measuring chamber refills automatically to the full pre-measured amount when the carton is tilted.

Acceptance of these advantages by the housewife is what Lever Brothers, first major manufacturer to market the package, hopes to find out in test markets, using Memphis and Columbus, Ohio, for the retail audits. Consumer education to the convenience of detergents in pre-measured tablet and packet form is cited as a reason for the belief that the metered carton, slow in starting four years ago, will catch hold today.

The distinctive feature of the package is a measuring chamber built inside of the container as part of the folding-carton design. The measuring section is incorporated in the one-piece blank as an integral die-cut and scored section extending inside beyond the normal glue-seam side of the carton to provide (a) a loading chamber, (b) a valve through which the contents flow by gravity into the loading chamber and (c) a discharge chute from whence the detergent pours out of the carton's perforated-flap top opening in the usual way.

When the box is inverted, the weight of the flowing product opens the valve to fill the chamber.

*See "Self-Metering Carton," MODERN PACKAGING, Nov., 1957, p. 162.



Metering mechanism *is demonstrated by these drawings showing carton partially filled to illustrate automatic principle. Blank is one-piece, die-cut, scored and glued construction. The paperboard valve opens when carton is tilted downward (1) and closes when the carton is turned upright (2). Sketch (3) shows chamber filled ready for the next pour.*

metered carton

A four-year-old idea comes to life, as Lever Brothers finds its own answer to the consumer's demand for measured-quantity convenience in the use of powdered washing detergents

When the box is returned to normal position, the valve automatically closes to retain the pre-measured quantity which dispenses through the discharge chute. Inverting the box is all that's needed to pour the measured amount. The action is repeated each time the box is turned over.

The built-in measuring device, according to Lever Brothers, does not interfere unduly with filling on production lines. The supplier delivers the cartons with the measuring device affixed to side walls and the side seam glued. Top and bottom flaps are sealed at the time of filling. The cartons are run on regular filling lines which have been very slightly modified with only a minor decrease in speed.

Accuracy, strength and performance of the new package have been thoroughly tested, says the supplier. Previous users—although none has been on a national scale—have reported excellent results and gratifying consumer acceptance. The new carton costs only slightly more [*Continued on page 245*]

SUPPLIES AND SERVICES: Metered carton by Mead Packaging, Atlanta, Div. of The Mead Corp., Dayton 2, Ohio, under exclusive license from U. S. Metered Container Corp.

Pre-measured amount *of detergent, just right for average laundering load, is released by normal pouring motion; then the flow stops. Turn the box upright again and it's ready to pour the next charge. Contents won't spill if the package is dropped.*

SUCCESS STORY NO. 9 OF A SERIES

TROPICANA

Adapting existing packaging and distribution methods used for milk, this Florida citrus processor has established its leadership in the cartoning of pure, chilled, whole orange juice in milk-type containers transported in its own refrigerated vans for delivery by dairies to stores, homes and restaurants. Despite competition from canned frozen concentrates, Tropicana's early recognition of a market for a whole juice conveniently packaged and aggressively promoted is helping to broaden the consumer acceptance of all citrus products.

Juice in a milk carton *provides consumers with a familiar convenience package. Side panel of wax-coated container promotes other Tropicana citrus products.*

Juice in a tanker *won widespread attention for Tropicana. This refrigerated ship has now given way to transportation of packaged juice in refrigerated trailer trucks.*

It was in 1954 that the company now known as Tropicana Products, Inc., came up with the startling idea that chilled, whole Forida orange juice could be delivered each morning to doorsteps in the New York area—as fresh as the milk and the morning paper.

This was the start of a thriving new industry that has succeeded in the face of the already-established success of its direct Florida competitor—the canned, frozen citrus-concentrate industry. Today Tropicana is the biggest-selling brand of chilled, whole orange juice in the world. It has expanded distribution over the entire East Coast, into Canada and as far west as Oklahoma. It has competitors in its field today—but sells more than all competitors combined. Perhaps the biggest tribute to its success is the fact that the biggest packager in the frozen-concentrate field has recently begun marketing chilled citrus juice in a similar package.

The *Success Story* of Tropicana orange juice was built on two novel and fundamental concepts:

1. The publicity-potent and practical idea of shipping chilled orange juice in bulk, in a 1½-million-gallon refrigerated tanker ship, from Florida to a central packaging plant in New York.

2. The use of an existing, time-proven package—the paper milk container—as well as standard milk-filling machinery and the established daily milk-distribution system.

Now that success has been established, the good ship *S. S. Tropicana* has been abandoned in favor of overland refrigerated transport from Florida that more readily reaches a variety of distributing points, and the package itself is subject to change. But in getting where it is today, Tropicana orange juice has provided a classic example of building upon the existing transportation, packaging and distribution methods of a different commodity—milk.

Retail sale of orange juice probably originated at roadside stands

that have long been one of the first sights greeting tourists in Florida. Local distribution of fresh juice extracted daily and delivered over established routes was a natural next step. But then came failure in attempts to expand the market. After two large dairies had tried unsuccessfully to build a business of packaging and freezing the whole juice in individual containers for home delivery in the '30s, nobody tried again for two decades.

Then Tropicana came along with its main plant in Bradenton, Fla., its tanker for transportation of the juice and a big packaging facility at Whitestone, Long Island, N. Y., to serve the large metropolitan New York area and nearby communities.

Until a few months ago, chilled, whole juice for this market was bulk delivered by ship and cartoned at Whitestone. Now all Tropicana chilled, whole orange juice is processed and cartoned at Bradenton and trucked to widespread markets.

The cartoned whole-juice industry that Tropicana pioneered when it was first known as Fruit Industries, Inc., now consumes more than 7,000,000 boxes of fresh oranges annually, about 10% of the total quantity used by all orange processors and about 15% of what the frozen-concentrate industry consumes. Tropicana is one of the top 10 citrus processors in volume of fruit consumed.

Tropicana's story is primarily that of one man—its founder and still its president, Anthony T. Rossi. From packing citrus salad in the early 1950s, Mr. Rossi developed a diversified line of citrus products for home, farm and for industry.

His first orange-juice container was a standard wax-coated milk carton. The wax was soon modified to withstand better the citric-acid content of orange juice. Today 80% of Tropicana's orange juice is packed in quart and half-pint cartons, the rest in glass quarts. While company executives like the carton's low cost and light weight, they continually search for improvements in their packaging's resistance to heat, oxidation and transportation abuse.

Since chilled orange juice is a highly perishable product, Tropicana now ships the packaged product in its own fleet of refrigerated 12,000-qt. tractor-trailer trucks. Dairies, always its prime distributors, receive shipments of the juice several times a week for frequent delivery to stores, homes and restaurants.

The juice is processed at Bradenton, Fla., in equipment so designed and built by Tropicana itself that oxidative changes are reduced and bacteriological count is kept to a minimum. Cartons are filled at a temperature ranging between 30 and 35 deg. F. on standard milk-filling equipment. Huge refrigerated tanks are provided to store juice for packaging during the off season.

To boost sales in non-retail locations, Tropicana has ventured into vending machines for schools, factories and offices. And for eye-catching display, it has built refrigerated self-service machines designed to divorce its product from supermarket dairy cases.

All of the elements of a major *Success Story* have been combined in Tropicana's brief postwar career: early recognition and identification of a potential large-volume market, the creation of a high-quality product, low-cost convenience packaging, an aggressive advertising and promotional program, distribution and marketing and frequent delivery of the product with the regularity and dependability that consumers have come to expect of the milk man.

SUPPLIES AND SERVICES: Cartons and filling equipment by American Can Co., 100 Park Ave., New York 17.

PHOTO COURTESY AMERICAN CAN.

Juice on a milk-filling line *made possible Tropicana's use of an existing and practical package. Today 80% of Tropicana's whole orange juice is marketed in cartons; the remainder is packaged in glass.*

THIS MONTH'S COVER

Cartoned orange juice with the freshness of milk and the morning paper is suggested in this photo created for MODERN PACKAGING *by Ray Cicero.*

Spray-on for greaseless cookery

A potential for another aerosol in every household is seen in "Pan Magic," a new spray product developed by the Home Products Dept. of American Machine & Foundry to coat kitchen utensils for greaseless cooking. One application of the new spray coating reportedly will keep food from sticking to a utensil for months. With a 3-oz. aerosol can of the new product at $1.98, the housewife may treat as many as eight pans, in contrast to investing as much as $6 for a single factory-treated frying pan, according to AMF.

Convenience and uniformity of application were primary considerations in the selection of aerosol packaging for this purpose. The development is the result of careful research in developing the proper spray pattern and creating a product for aerosol dispensing with the right solvents and propellant. The three-piece container is equipped with a tilt-action valve. Full directions for use are contained on the wrap-around paper label which illustrates uses on frying pans, ice-cube trays, griddles and Pyrex dishes. *Container by American Can Co., 100 Park Ave., New York 17. Valve by Aerosol Research Co., Forest Park, Ill. Aerosol filling by Aerosol Techniques, Inc., Bridgeport 5, Conn.*

Ideas in Action

Now it's canned cocktails in six-pack carry cartons

Mixed alcoholic beverages in metal cans now are being test marketed in Florida by Continental Beverages, Inc., Winter Haven. Bringing a touch of supermarket merchandising technique to retail liquor dealerships, the 6-oz. cans are packaged in colorful, foil-lined six-pack carrier cartons. According to the company, the canned drinks can be sold in many states by stores that hold a Federal liquor license. Three popular varieties of ready-to-serve vodka-based beverages—Screwdriver, Bloody Mary and Salty Dog—are offered by Continental. Each punch-open can contains at least 1 fl. oz. of vodka, stated on the container as required by Federal law. The contents are said to constitute an average individual serving.

This use of metal cans for mixed spiritous products is reported to be a first, although some years ago a California vintner introduced a line of wines in cone-top crown-cap cans (see MODERN PACKAGING, Jan., 1955, p. 92). As in the earlier application, the advantages cited for metal cans include fast chilling and cold retention, light weight and unbreakability. *Metal cans and multipack cartons by Continental Can, 633 Third Ave., New York 17.*

'Extra-panel' recipe sheet

General Mills bids to give its Betty Crocker brand a competitive edge in the hotly contested battle of the cake mixes by offering a four-color pictorial recipe sheet that can be easily stripped from the back of the carton without causing damage to the package. This "extra back panel"—made of stiff, high-gloss paperboard and designed to be filed in the user's cookbook for future reference—is vertically perforated along both sides to facilitate removal. The recipe panel is mechanically glue sealed along vertical edges to the back of the carton, which is printed with general instructions for using the cake mix.

The front of the removable recipe sheet contains colorful photographic reproductions of six cake desserts that can be prepared with the mix. Detailed recipe data for each are printed on the reverse side. A total of 10 different tear-off recipe pages is being offered by the packager.

General Mills is promoting the new Betty Crocker "Picture Recipe Package" with a national advertising campaign running in consumer magazines, Sunday newspaper supplements and network television. *Carton and recipe sheet by Waldorf Paper Products, 2250 Wabash Ave., St. Paul 14.*

Tear-open round fibre can

New consumer convenience, basic economy and improved packaging-line efficiency are the advantages reported for a tear-string-opening cylindrical metal-end fibre can adopted for frozen whole strawberries by Food Fair, Inc., Snider Farms and North Pacific Canners & Packers. A tug on the projecting end of the tear string—which is imbedded under the container's wrap-around paper label ½ in. from the can top after filling and closing—loosens the separate friction-fit closure end. It is then lifted off by the consumer. No other opening device is required. The fibre can's convolute body is wax coated on the interior, as is the inner surface of the metal-end closure. Unprinted can-end exteriors are enamel coated in white for appearance and protection.

Cost of the cylindrical container is said to be one cent less per unit than that of conventional tub containers with lithographed metal ends. Because the 1-lb. can size used by the firms is the same diameter as the conventional No. 303 metal can, it reportedly can be run on standard single-head canning equipment, with minor modifications, at speeds up to 90 per minute. *Fibre can by Sefton Fibre Can, Div. Container Corp. of America, 3275 Big Bend Blvd., St. Louis.*

Redesign for AUTOLITE

New parts division of the Ford Motor Co. matches its No. 1 competitor with clean, modern package format and graphic symbol that will distinguish its products on distributors' and dealers' shelves

Increasing competition in the sale of automotive replacement parts impels the big automobile makers to strengthen their corporate identity against the possible inroads of "equivalent" brands.

Last month it was the world's biggest automobile manufacturer, General Motors Corp., which announced a dramatic package-redesign program for grouping the company's automotive-replacement parts from 12 different divisions under a single brand name and modern graphic symbol.[1]

This month the Ford Motor Co., No. 2 in the automobile industry, reveals a comparable redesign program for replacement parts distributed through its recently acquired Autolite Division. Again, the keys to the program are a clean, modern, well-proportioned package format and a single graphic trademark symbol.[2] Even before the merger, the Electric Autolite Co. had begun a thorough study of its packaging program.

Says Edwin R. Stroh, then vice president of sales for Autolite, now general sales manager for the new Ford division: "The company needed a single strong image in the replacement-parts field. For too many years each division was allowed to package its individual products as it saw fit. The net result was a variety of impressions that diluted the impact."

A design firm was asked first to develop a new trademark that would reflect the firm's progressive approach to automotive-parts production. The result is a simple four-pointed star device in a circle —memorable and immediately recognizable.

This symbol has been combined with a change in

[1] See "For GM: 1,200 Designs on a Single Standard," MODERN PACKAGING, Sept. 1961, p. 124.

[2] See "The Question of Trademarks," MODERN PACKAGING, Sept., 1961, p. 95.

Family unity *and a bright, modern look are achieved by a vermillion and black color scheme on white-coated stock. Abstract symbol of a four-pointed figure in a circle is memorable and instantly recognizable. Elimination of the hyphen in "Autolite" takes the emphasis off "Auto," since these products are used today in aircraft and rockets as well as for automobiles.*

lettering style of the trademark name, eliminating the hyphenated form "Auto-lite." Removal of the hyphen is calculated to place less emphasis on "Auto," since the company's products are today used in aircraft and rockets as well as automobiles.

Following approval of the trademark, the designers were asked to develop a coordinated packaging program that would fit hundreds of different types and sizes of packages.

The initial step was a month's intensive study of Autolite's packaging facilities, existing packaging equipment, interviews with parts dealers and service-station personnel, and an analysis of competitors' packaging and display procedures.

It was discovered that certain economies could be effected by unification of sizes. In the spark-plug division, the altering of a package by $\frac{1}{8}$ in. in the new program eliminated five former odd-size boxes.

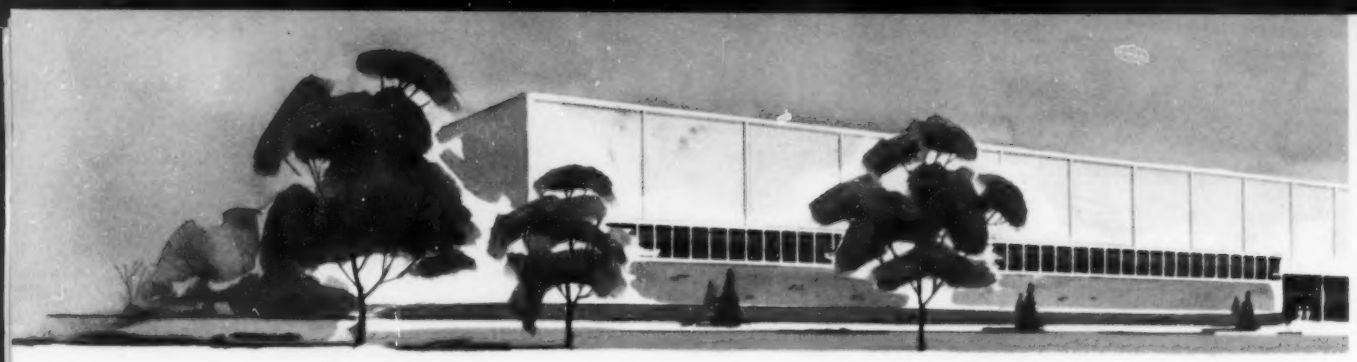
Dummy packages were prepared and compared with competitive packages on dealers shelves. This revealed that certain colors were used more than others, pointing up the need for distinctive color treatment. The research also indicated that more space should be allotted to the code or part number on end flaps to facilitate inventory and selection.

Silk-screened samples of two designs in two color schemes were finally displayed against competitive packages. One of these was predominently vermillion red with black on white-coated stock; the other, predominently black with some red on white-coated stock. The former was Ford's final choice.

The basic color scheme was varied slightly for Autolite Batteries packages. Green is used in one case and gold in another, because the batteries are color coded this way and are so identified by users.

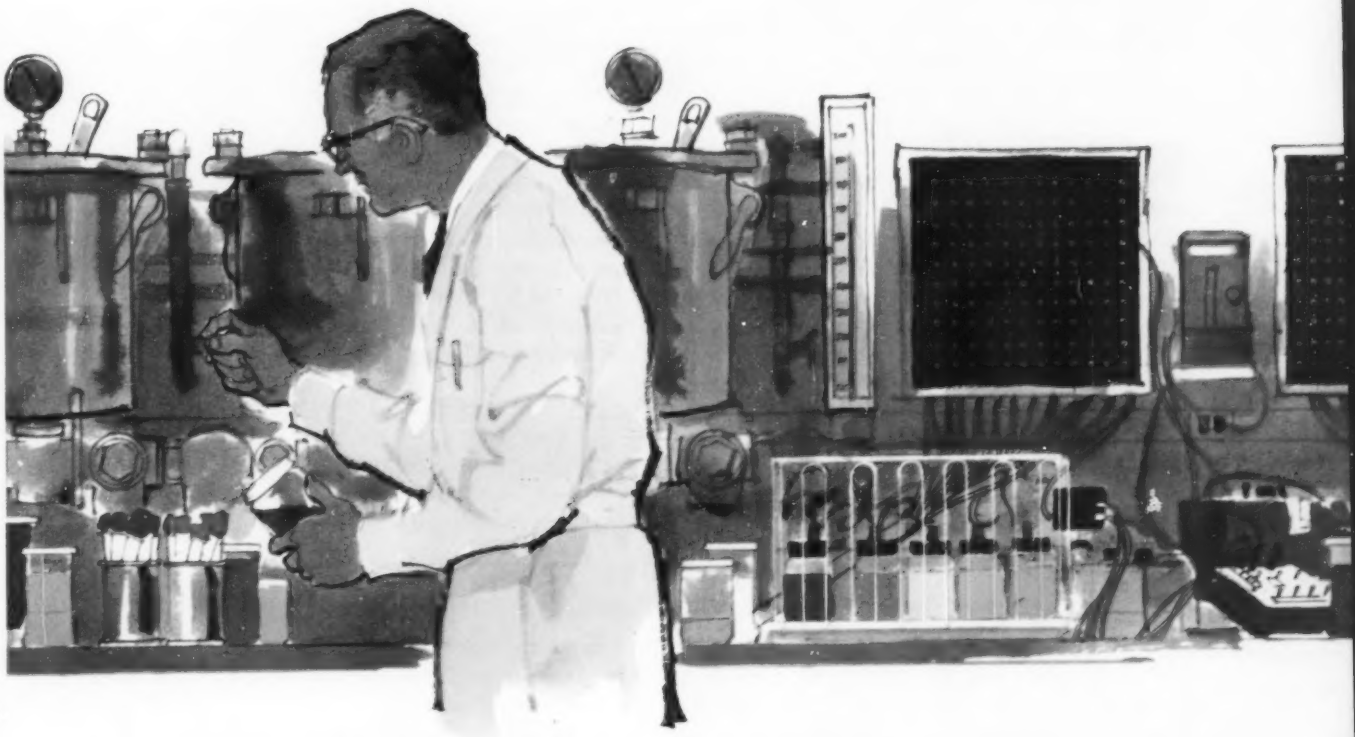
According to the company, the new packaging lends strength to the whole line—an attractive, fresh, new point-of-sale campaign in itself.

SUPPLIES AND SERVICES: Design program by W. B. Ford Design Associates, 600 Woodward St., Detroit.



Here, GLASS PACK PROGRESS

is the daily assignment



White Cap research and development people are now completing their move into new quarters in Continental's great new Packaging Research and Development Center in Chicago.

The news, here, is interesting on two counts.

First, the considerable enlargement and improvement of equipment in the new quarters is notable.

But perhaps even more important is the new close contact with all the far-ranging package research activities now under the same roof. Here, the quest for progress is proceeding on many fronts and is probing far into the future. Through White Cap, the benefits of these far-reaching activities can now be brought to bear more easily than ever on the problems of closure users.

With these new facilities and new combinations at work, White Cap "R & D" promises a greater contribution than ever. In its work, every one of the packer's problems of glass-pack production and protection, of package convenience and appearance, is under the continuous and wide-ranging scrutiny of an organization admirably manned and equipped to do the job.

There is justifiable pride in the past, here. But the emphasis is on today and tomorrow—and on building more and more reasons for the close ties between this company and the glass packers.

WHITE CAP COMPANY

DIVISION OF CONTINENTAL CAN COMPANY

9-61

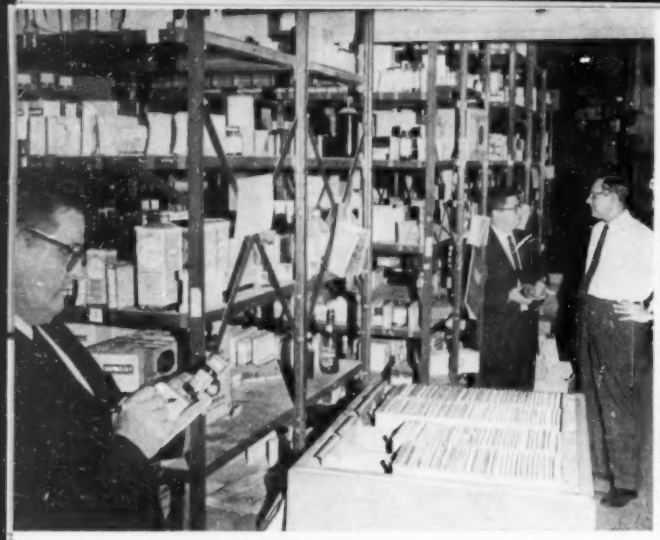


PHOTO COURTESY FOOD & DRUG ADMINISTRATION.

Eyes of the F&DA *are its enlarged staff of 600 full-time trained investigators, who regularly check package weights and labels throughout the chain of distribution. Here, inspectors run a check on labels at a wholesale drug house.*

The 'deception'

Word from Washington is that the lengthy current session of Congress has stalled resumption of the Senate Antitrust and Monopoly Subcommittee's hearings on "deceptive packaging" until late in October—if then. But there is no lack of action on this critical newsfront. Federal enforcement agencies are continuing their drives against packaging violations and packaging men are beginning to crystallize their efforts toward bringing the situation into focus—even to taking the initiative in making the changes that now seem necessary in order to put consumer-goods packaging above reproach.

If the Senate packaging hearings, directed by Sen. Philip A. Hart (D., Mich.), are presently inactive due to more pressing business on Capitol Hill (see Senator Hart's statement to MODERN PACKAGING herewith), the Food & Drug Administration is experiencing no such doldrums. F&DA has, in fact, launched an all-out drive against short-weight or obscure labeling that has resulted in more than 125 seizures since June 15.

Although the great majority of these actions have been against short-weight violations (the stated net weight on the label being higher than actual contents weight), it is significant that in 25 cases seizure was made on the grounds of "inconspicuous labeling" of mandatory information, including the contents statement. This, of course, is one of the "packaging abuses" which made the juiciest newspaper copy at the Senate subcommittee's consumer-oriented June hearing.[1]

Considering the difficulty of interpreting the Federal Food, Drug & Cosmetic Act as it relates to the matter of labeling[2] a brief listing of some of

[1]See "Deceptive Packaging," MODERN PACKAGING, Aug., 1961, p. 107, and "Deception: Progress Report," MODERN PACKAGING, Sept., 1961, p. 107.

[2]Under the law, mandatory copy must appear on the label "with such conspicuousness and in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use."

Statement by Senator Hart to MODERN PACKAGING

The initial hearings on packaging and labeling have proved valuable in bringing smoldering consumer discontent with packaging and labeling practices into the open. They have pointed up also the importance of rational consumer choice not just to help the shopper stretch the household budget, but to protect the honorable producers who should be rewarded for their efforts to give a better product at a lower price.

As I said at the end of the last hearings, whenever something develops and grows at an expanding rate, such as pre-packaging, we sometimes forget to pause and check the bidding. The action being taken by many phases of the industry since the hearings indicates that those concerned are doing just that. And if their efforts make it just a little easier for the consumer to make a sensible choice, to be able to compare prices a little more simply, then everybody will have benefited—the consumer, the economy and the honorable producer.

Before completing the inquiry, we will call representatives of all concerned: the retailers, wholesalers, producers and others with a stake in packaging. There has been some criticism on your own pages because producers have not been called sooner. However, the decision as to whether legislation is necessary or not and, if so, what type of legislation, will not in any way be determined until the hearings are concluded.

Certainly those who will be most affected are entitled to an opportunity to be heard and to talk to the total problem. However, common sense requires that the testimony be developed logically and this is the manner in which we intend to proceed.

pot still boils

F&DA's 'summer offensive' includes 25 actions charging inconspicuous labeling. Meantime, Hart hearings await Congress adjournment and packaging field takes decisive action on its own behalf

these seizures and the F&DA's reasons for taking action may prove valuable to packagers in gauging the vulnerability of their own labels.

Beech-Nut Five-Flavor Life Savers: Company name and address and net-weight statement are printed in black type which runs across a series of broad, multicolored stripes that comprise label background. F&DA contends that the colored stripes camouflage the lettering, making it almost illegible.

Safeway Stores' chocolate-covered peanuts: Mandatory carton-label data appear in small, brown letters against a product-reproduction background design. F&DA has seized packages.

National Licorice Co.'s Licorice Twist: Copy, printed in black on a transparent cellophane bag, becomes virtually invisible when the package is filled with black licorice candy, F&DA says.

Wilkins & Rogers' corn-bread mix: F&DA charges that company name and address, net-weight statement and ingredients data appear in excessively small-size type on the back of the carton.

Peanut Products Co.'s canned cashews: Net-weight statement is confined to the key strip of the vacuum can. Thus, when the strip is removed, the container no longer bears the required quantity data. F&DA's objection on this point raises a new question: Can a consumer *still* be deceived after a clearly labeled package has been purchased?

It is highly improbable that any of these inconspicuous-labeling actions will be contested in court. F&DA feels that the violations are clear and expects no difficulty in enforcing correction. Beech-Nut Life Savers, for one, has told MODERN PACKAGING that it intends to make the changes necessary to comply with the Government's viewpoint.

Crackdown to continue

Packagers—whether of foods, drugs or cosmetics—should be forewarned that F&DA's current "summer offensive" is not likely to sputter out in the near future. On the contrary, it is an indication of increased Federal vigilance regarding intentional or unintentional deception in packaging.

And F&DA now has the physical means to mount a broad and sustained attack. Operating under the biggest annual appropriation in its history, the agency also has expanded its force of full-time field investigators to 600—triple the number it had in 1956. Plans are to build up the force of investigators to an ultimate strength of 1,000.

It is largely through the efforts of this beefed-up staff of permanent investigators—each a college graduate with a degree in biology or physical science—that F&DA has been able to increase its enforcement activities. When an investigator discovers an apparent violation of the Food Law in his inspection of a packaging establishment, he forwards the information to Washington for action.

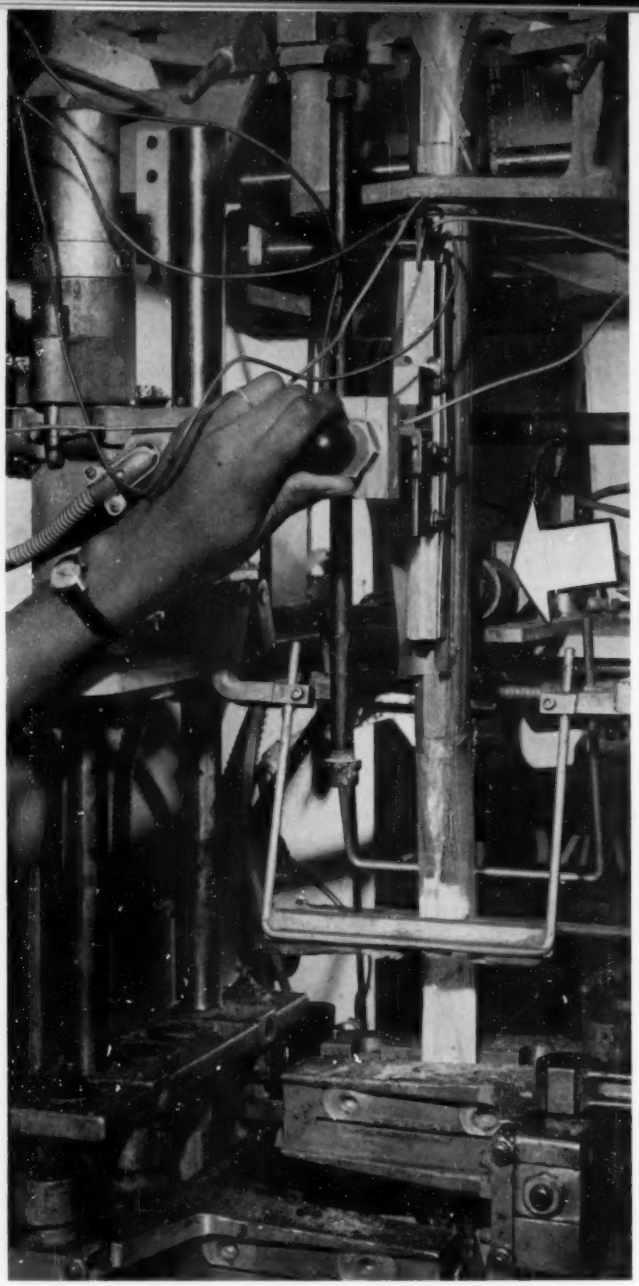
FTC's potentials

F&DA's jurisdiction over "deceptive" packaging and labeling extends to foods, drugs, cosmetics and medical devices. But there [*Continued on page 246*]

'Inconspicuous labeling' charges *are beginning to hit some of America's biggest and most reputable packaged products. F&DA has seized quantities of this Life Saver package, on the charge that the roll wrapper's multicolored stripes camouflage the small-type net-weight statement and company name and address, making the lettering almost illegible. The Beech-Nut Life Saver Co. is taking immediate steps to correct this.*

Success with PVA

A small newcomer in the washing-products field has built a business around water-soluble packets and has learned tricks about handling this type of film which eliminate many problems



Modified former-filler-sealer *enables Water Soluble Products to handle tricky PVA with few failures at rate of 96 pouches per minute. Refinements made by the packager include: a paper break (arrow) to reduce film snap-back during pouch cut-off; vertically mounted air jets for quick cooling of tubular film's back seam and U-shaped product catchers (in open position) that close in on the tube during filling to prevent product trickle into the sealing area during heat sealing.*

For all its marked advantages and continuing improvements, poylvinyl-alcohol film for soluble packaging still is something of a problem child. It is a tricky film to handle and the high production speeds needed by big-volume soap and detergent manufacturers have been slow in coming.

The packaging-machinery field has for some months been abuzz with reports of impending ultra-fast PVA machines capable of turning out 400, 600 and even as many as 800 pouches per minute. (One of these is rumored already being test run by one of the country's largest soap producers.)

In the meantime, packagers need all the specific information they can get on water-soluble films if the obvious potential of such materials is to be realized. So it is noteworthy that a packager who has concentrated on PVA, oldest of the water-soluble films, from its availability is willing to share his marketing and production experiences, good and bad.

The packager, Water Soluble Products Co., Chicago, is a small and relatively new company which cannot compete with the soap giants in either promotion or machinery. Nonetheless, in little more than a year it has managed to:

1. Carve out for itself—with a line of six PVA-packaged laundry products sold only through vending machines in coin-operated laundries—a specialized and fast-growing marketing niche.

2. Modify a standard, two-tube, form-fill-seal machine at the least possible expense, so that it turns out a steady 96 PVA pouches per minute with a minimum of down time.

3. Package powdered chlorine bleach successfully in PVA—thought to be a first.

4. Accumulate a backlog of PVA know-how that should serve the company well as volume expands.

Merchandising

Water Soluble Products is a company literally built around a packaging material. Its "Drop" line of laundry products (high-suds detergent, low-suds detergent, bleach, bluing, starch and alkali break) was earmarked for PVA from the start. The company's executives realized, however, that the dissolving package—while a genuine consumer convenience and an important impetus to sales—would not compensate for a mediocre product. The coin-laundry customer might watch with interest as her first purchase dissolved, but unless she got a really clean wash, she would not buy the product again. So the firm spent much time and money working out product formulations which did a superior cleaning job and were compatible with PVA film.

The line was introduced in Kansas City last fall and was an immediate hit. It is now available in more than 2,000 coin-operated laundries in eight major cities, with distribution expanding rapidly. The packager has no present plans to go retail.

Water Soluble Products has learned most of its PVA lessons the hard way. Once off the packaging line, film failures can usually be traced to poor product stability, the packager reports. If any powdered cleaning product is not thoroughly blended, its chemical components are likely to concentrate in one area. This is particularly true of chlorine bleach. Concentrations of straight chlorine in PVA-packaged bleach will absorb moisture from the film. Chlorine action begins and the film's composition changes from polyvinyl alcohol to polyvinyl chloride. PVC, of course, will not dissolve and the result would be a dissatisfied customer.

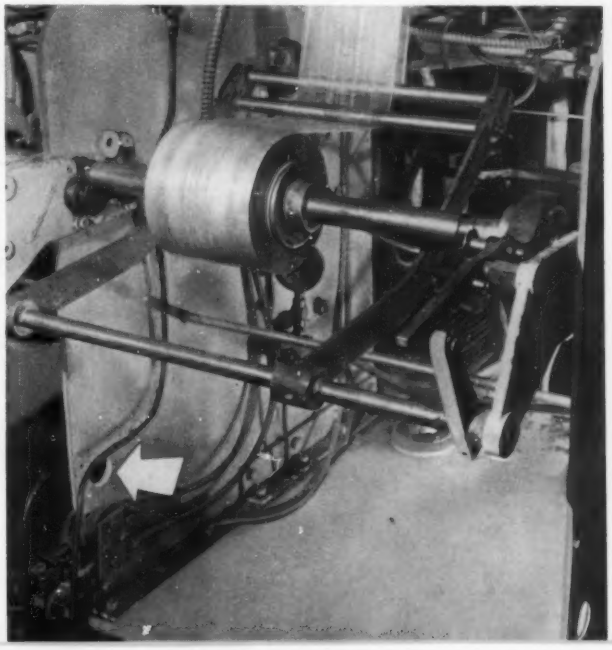
The company has met the problem by (1) improving product stability through reformulation, (2) using polyethylene bags as an outer wrap for each 200 PVA pouches to minimize the effect of outside moisture, (3) urging coin-laundry operators to rotate their bleach stocks carefully, refilling the vending machine from the top and moving older bleach pouches to the bottom of the column.

Package printing was another temporary problem. Operating on the theory that a new product line in a revolutionary package should be as eye catching as possible, the first PVA pouches were flexographically printed in vivid red, green or blue. But it was found that the deep-hued ink would merge with the water before items being laundered were in full agitation in the washer. Occasional staining of items in the wash load resulted.

So the company switched to a pastel blue ink for all products, which provides adequate print legibility and reportedly is a more acceptable color to housewives. As a further precaution, reverse printing is

Moisture protection *for humidity-sensitive PVA pouches is provided by sealed polyethylene bag into which the filled unit packages are loaded for shipment in corrugated cartons.*

Shorter web travel, *to improve machine performance of stretch-prone PVA, has been made possible by raising web-core assembly 18 in. from former position (arrow). Idler rolls above web are constantly adjusted to regulate film tension.*



now used. Thus most of the film bag dissolves before the ink starts to flow, allowing time for the washer to fill more completely. The amount of design and copy on the pouches also has been cut to a minimum and the stain problem appears to be solved.

It is not possible for Water Soluble Products to use unprinted pouches because the purchaser must have use instructions. Women have proved surprisingly quick to understand the use of PVA containers even in markets where the film was unknown. Promotion copy on front of pouches proved effective in schooling customers on proper use: " 'Drop' in the new Melt-A-Way Bag . . . bag 'n all goes into the wash water—it melts away!"

The "Drop" line is priced at 5 cents per pouch—enough for one wash load—but many vending machines take dimes only. The packager reaches this market with two PVA pouches in a small carton.

PVA's tendency to crack in cold weather impelled the company to ship its products all last winter in heated trucks. The film has been so much improved in the last few months, however, that this precaution probably will not be necessary this year.

One size of corrugated shipper is used for all products, even though pouch lengths vary and some are cartoned. All pouches are 2 in. wide, but may be 4, 5 or 5½ in. long depending on product. The company uses 1½-mil film for all of the pouches.

Use directions *printed on individual PVA pouches also are spotlighted on the banner posted above the coin-laundry vending machine. Venders that take only dimes dispense two pouches in a folding carton; the five-cent machines dispense the single packages.*

Production operation

The machine used by Water Soluble Products to package its "Drop" products has two tubes and looks at a glance very much like a standard form-fill-seal machine. Some significant changes have been made in the machine, however.

Since PVA is highly elastic, it performs best when it travels the least distance. So the packager has remounted the web-core assembly fully 18 in. above the usual position of its location to shorten the route between the web and the sealing area.

The film moves through a series of four idler rolls, two of them adjustable and all placed as close together as practicable. During the packaging operation the two adjustable rolls are raised at frequent intervals to regulate tension as the amount of film that remains on the web declines.

The PVA film is powdered before rewinding to reduce stickiness. Therefore, it is not necessary to use Teflon-coated rolls, a common practice with PVA, although the forming tube and the heating elements are so coated. Registration of the printed film is controlled by a photo-electric cell.

Because of the film's tendency to stretch, the company has added a "paper break" to its machine. This plunger-type device, activated by solenoid and microswitch, is located at a point just after the web is formed into a tube. It moves forward and grasps the web briefly at the instant the finished pouch below is severed and released. This impedes film "snap-back," otherwise a problem with the handling of PVA because it plays hob with print registration and package-size uniformity.

After being formed into a tube, the film is sealed longitudinally by a spring-mounted resistance heater. Water Soluble Products has added a vertical panel of air jets to its machine to cool the back seam quickly. This has had the effect of minimizing the PVA film's tendency to stick.

Another innovation by the packager is a pair of "product catchers"—two [*Continued on page 238*]

SUPPLIES AND SERVICES: Modified Model 200-01-V form-fill-seal machine by Lynch Corp., Anderson, Ind. "No. 7" PVA film by Mono-Sol Corp., Gary, Ind.

Rayon-fibre strapping in action

Lightweight, flexible and easy to handle, this heavy-duty banding material holds fast under severe stress; it has produced big savings in labor and material costs

Users of strapping in heavy-duty shipping packing are watching with interest the performance of new lightweight fibrous strapping tapes that combine rugged strength and care-free handling with impressive savings in over-all packaging costs.

A case in point is the experience of Louvre King, Monterey Park, Calif. (50 employees). This manufacturer of aluminum window frames and jalousie hardware reports an 86% reduction in packaging-material costs and a 50% cut in labor costs since adopting a new rayon-fibre strapping.

The low-cost material's tensile strength, long-term durability and light weight are reported to make it applicable to many industrial packaging and bundling jobs that require the security of strapping.

Window frames made by Louvre King vary widely in size and the quantities ordered fluctuate just as widely. Formerly, four to five window frames were unitized by wrapping a strip of heavy-gauge corrugated board completely around the outer edge of the grouped items. The protective corrugated was secured by means of manually applied filament tape. Two workers were required for the job.

Despite all precautions, jolts and stresses in transport caused slack in the filament tape, which often resulted in serious scratch damage to the frames.

The new rayon-fibre strapping-tape's tenacity—even under severe handling conditions—has eliminated this costly problem, says Louvre King. It has, in fact, enabled the company to switch from the all-around corrugated strip to far more economical, lightweight corrugated corner caps which are said to provide adequate product protection.

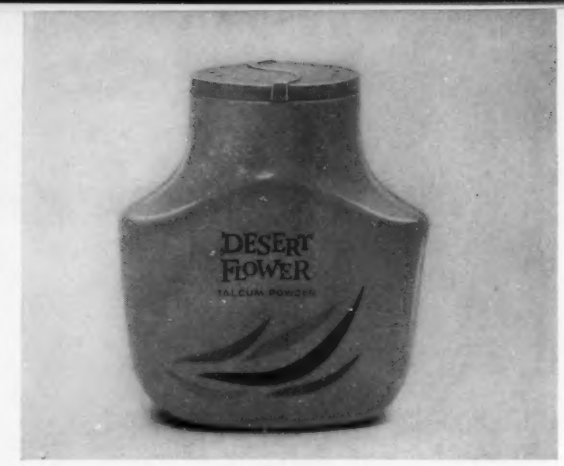
Shipment packaging *of grouped aluminum window frames, formerly a two-man job, now is handled by a single worker (above) who tensions and cuts reel-fed fibre strapping tape with a simple hand tool. Close-up at right shows multiple rayon fibres of new strapping. Metal seal applied around tape band is crimped by tensioning tool to insure tautness.*

Major labor savings also have been reported. In a one-man operation, the reel-fed tape is tensioned and cut by a manual strapping tool. An inch-long metal seal is applied around the tape band and crimped by the tensioning device to insure tautness.

Louvre King also uses the new strapping for cartons holding up to 100 lbs. of window hardware.

SUPPLIES AND SERVICES: "Avistrap" rayon strapping and manual strap-tensioning and cutting tool by American Viscose Corp., Industrial Packaging Dept., 1617 Pennsylvania Blvd., Philadelphia 3.

PACKAGING PAGEANT



1

1 Pleasing simplicity of Shulton's blow molded polystyrene container for Desert Flower Talcum is calculated to make it a sleek, modern dressing-table accessory. Introduced in anticipation of an early Christmas holiday season, which in the cosmetic trade starts now, the new container is molded in a graceful, hand-fitting shape in soft pink flesh tones. Silk-screen decoration complements the feminine appeal of this larger luxury flask, holding 6 oz. of talcum. A convenient sprinkle-top closure completes the package. Container, Wheaton Plastics Co., May's Landing, N. J.

2 The hardware industry "borrows" a packaging idea from the food industry. A furniture-stripping method for home use, packaged like a cake mix, is reported to have achieved a marked success in the growing do-it-yourself market. The Savogran Co. puts all the ingredients for stripping paint or varnish from furniture into a single three-color-printed carton which, through copy and illlustrations, completely conveys the product's full story. Carton, KVP Sutherland Paper Co., Kalamazoo, Mich.

3 To keep in step with the trend to colorfully printed egg cartons, American Stores Co. spruces up the sturdy molded-pulp container for its Acme Ideal private-brand eggs. Although the surface of molded pulp cannot be process printed, full-color realism is achieved by affixing colorfully printed paper labels to the container's top panel. Dominating the label is a reproduction of a basket of farm-fresh eggs against a colorful floral background. Side panels are one-color printed in blue with reverse lettering, directly on the molded pulp. Containers are supplied to American Stores complete with label attached. Container, Diamond National's Molded Packaging Div., New York.

4 Extruded tubes of butyrate plastic are now used by the Panef Mfg. Co., Inc., for convenient, easy-to-use dispensing of sewing-machine oil. The oil feeds out in handy drops and can be applied directly to the point of trouble in a jiffy to lubricate precision parts. Extruded butyrate tubes are also used for the company's Lub-a-Lite lubricant, a dry, white powder that puffs on to stop squeaks and sticking of metal, wood, leather, rubber or plastic parts. "Tulox" tubes supplied by Extruded Plastics, Norwalk, Conn., using Tenite butyrate by Eastman Chemical Products, Kingsport, Tenn.

5 Ideal Toy Corp. solves the problem of rapid identity for side panels of packages stacked on self-service shelves. Four- or five-color process-printed overwraps for a new line of 18 games

4

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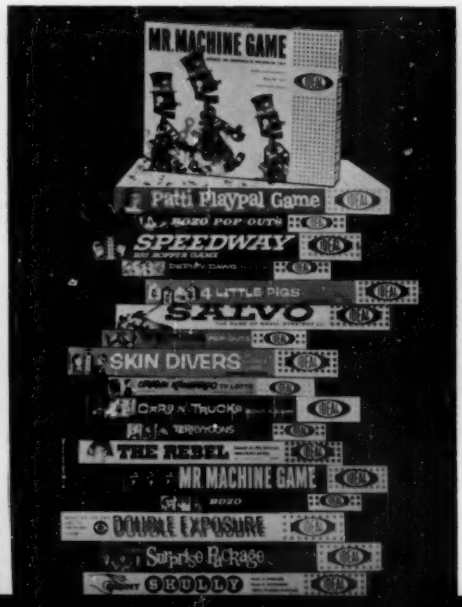

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covering all age groups give maximum visual impact at point of sale no matter how cartons are placed on shelves. A strip of colored dots accentuates a new Ideal logo on the covers and all side panels of the cartons. Recommended age group on the top surface and descriptive copy on the under side speed customer selection and minimize temptation to open the box to examine contents. Thus carton damage and loss of contents will be minimized, the company reasons.

6 A snap-on polyethylene closure seals a new "table jar" of Honey Whip, an old-fashioned honey spread made by Walker & Sons Apiaries. To enhance appeal, the 1-lb. glass jars are sprayed with solid ceramic colors (coral, aqua, yellow or blue) and all copy is confined to the snap-on lid and applied paper label. Built-in handles at the shoulder of the jars are for ease in handling. The graceful jars are suggested for re-use as flower pots, miniature flower dishes, jelly molds, sugar bowls, refrigerator jars and paint pots. Jar, Owens-Illinois, Toledo. Closure, Buckeye Molding Co., Miamisburg, Ohio.

7 Capitalizing on the acceptance of the blow-molded plastic container for packaging bleaches, the J. L. Prescott Co. seeks to attain a competitive edge with greater convenience and re-use features suggested by the design of a linear polyethylene jug complete with integral handle for easy pouring. The container is said to be 20% lighter when full; when empty, it becomes a watering pot or, when cut in half, a flower pot and a funnel. Design, Francis Blod Design Associates, New York. Container, Arrow Rubber & Plastic Corp., East Paterson, N. J., using Du Pont's Alathon polyethylene resin.

7

8 The brand recall of a memorable trade character is often a way to increase sales volume of packaged products. A bid for greater consumer popularity is being made by Fall River Canning Co. for its "Little Pal" canned vegetables through a colorful new label featuring a cheerful "face" wearing a straw hat and a broad smile. Outline shape and color of the face varies to match the vegetable in the can, yet a family resemblance is maintained for the entire line. The trade character is superimposed over an illustration of the vegetable in table-ready state, while a full-color illustration of "straight-from-the-garden" vegetables dominates the background. Labels, H. S. Crocker Co., San Bruno, Calif.

8

Roll-feed combined wrap

Both decorative and protective properties have been built into one laminated, embossed, printed paper-and-foil sheet that cuts the cost and raises output of chocolate bars for Sweden's biggest packer

Savings of 20% in the cost of materials and a 10% gain in operating speed have been achieved through adoption of a single, laminated, paper-and-foil, roll-feed wrapper for chocolate bars by Marabou Chocolate Mfg. Co. of Sundyberg, Sweden's largest chocolate-packaging company. The new roll-fed wrapper replaces two separate wraps and runs on a conventional wrapping machine at production-line speeds of up to 125 bars per minute.

The development should be of considerable interest to American packagers. It suggests a trend toward "single-wall" protection in wraps paralleling a similar move in the folding-carton field. Convenience, too, is inherent in this simpler construction, which enables the package to be opened more swiftly and poses less of a disposal problem after use.

The old wrapper, similar to the packaging used for many bar candies in the U.S., consisted of a glassine-and-foil inner wrap and an outer cut band of embossed paper. Application of these wrappings required a more complex operation and thus necessitated greater capital investment in machinery and larger floor space in the packaging operation.

Combining all elements of product protection and surface design in one web, the new single wrapper reportedly provides the chocolate candy bars with the same shelf life as the more complex package.

Web construction

For appearance, the inner layer of 0.00035-in. foil, which prevents permeation of chocolate oils, is embossed with the company name and trademark. This foil layer is wax mounted by the supplier to an outer web of 37-lb. yellow kraft paper, which is also embossed with brand and product name, and is printed in brown, blue, red and gold. Both the embossing and printing operations are done by the supplier on a gravure press, marking a high achievement in precision and registration at high speed. The laminating of the two materials, performed in a separate operation, utilizes a wax compound with a melting point of 160 deg. F., applied at the rate of 2.0 to 2.4 lbs. per 1,000 sq. ft.

Between each individual wrap, the roll-stock material is deeply die cut at the edges to eliminate unnecessary material, which would create a bulky and unsightly fold when wrapped around the bar. A single glue seal on one longitudinal edge secures the entire wrap. The same-sized wrap is used for both the regular and the king-sized chocolate bars.

On the machine, the wrapping material is fed

Single-web wrap *of laminated foil and paper gives high-quality appearance and same shelf life as previous three-layer wrapper for regular and king-sized bars of chocolate.*

Die-cut laminate *of unusual shape eliminates excess material in the package folds and promotes faster operation of wrapping machine. Note over-all embossed pattern on foil side of material.*

from the side through a straight knife, which severs individual sheets from the web. The wrap then passes over a glue roll and is positioned in an elevator over a bar of chocolate. In the folding operation, the ends of the wrap are folded first against the bar, then the long flaps are brought around the outside and secured by the glue line. The wrapping action is performed both by the motion of the elevator and by various fixed plows and movable tucker arms that fold the wrapper in sequence. A rotating paddle then lifts the chocolate bars to an upright position, where they are held briefly in a compression section between belts in order to allow sufficient time for the glue to set.

The bars are hand packed in folding display cartons and corrugated cases for shipment.

The laminated and die-cut wrap, which permits a simplified and efficient packaging operation, is well worth consideration by packagers for other applications where a high barrier must be attained without sacrifice of sales appeal or ease of use.

SUPPLIES AND SERVICES: "Laminex" wrappers by AB Akerlund & Rausing, Lund, Sweden. Wrapping machine by Sweizerische Industrie Gesellschaft, Schaffhausen, Switzerland.

Standard machine *at Marabou, used previously to apply multiple wraps, also handles new web-fed lamination. Cut from the web by a rotary knife (center), individual wrappers move across a glue roll and are positioned over chocolate bars (left). Wrapped candy is held on end in compression section (center, rear) until glue has set up.*

New plan for the

The Packaging Institute's project to streamline its National Packaging Forum by cutting down on the number of seminars and speeches, and by synchronizing the concurrent sessions will be tested this month when the 23rd in the annual series gets under way Wednesday, Oct. 18, in New York. Moving from customary dates of the first three days of the week to the last three and to a different hotel this year—the Biltmore at Madison Avenue and 43rd Street—the Forum will not only emphasize technology as its theme, but will also apply some technical advances to its own agenda.

To expedite the 12 seminars (compared with 13 last year) and the four speeches in each seminar (compared with varying numbers of speakers previously), each seminar chairman, projectionist and doorkeeper will be equipped with a two-way radio telephone. This communication system is intended to improve the timing of movie and slide operation, smooth the entrance and exit of audiences, and assure needed equipment and sufficient seating.

Successive speeches in each seminar will start at the same moment as corresponding speeches in concurrent seminars so that packagers can select in advance the subjects they want to hear discussed and move from one seminar to another without missing papers they choose to hear.

All of these efforts are intended to overcome criticism of the "bulk" of recent forum agendas and irregular scheduling which interfered with the members' selection of speeches.

Although the 1961 forum's theme is "The Broadening Horizons of Packaging Technology," one highlight is expected to be a mid-forum luncheon speech by Sen. Philip A. Hart (D., Mich.), chairman of the Senate Subcommittee on Antitrust and Monopoly, who will discuss "The Hearings on Packaging and Labeling Practices and Your Package." Senator Hart's committee is currently investigating so-called "deceptive packaging." Another Government subject, the Food Additives Amendment to the Federal Food, Drug & Cosmetic Act, will be analyzed by four seminar speakers on the final day of the forum.

Walkie talkies *will synchronize starting of speeches in concurrent seminars so that packagers may move from one to another without missing what they want to hear.*
PHOTO COURTESY RAYTHEON.

As part of the institute's streamlining effort, the usual day-long seminars on drug and pharmaceutical packaging and production line and machinery have been cut to a half day each. New to the agenda as seminar subjects this year are package testing, industrial packaging and bulk packaging. Moreover, the opening day's feature presentation is on air cargo. E. L. Dare, manager of air cargo development for United Airlines, will indicate trends in air cargo of importance to packagers in a talk at 11 a.m. on Wednesday, Oct. 18.

This presentation follows an opening address by PI President L. H. Zahn, director of purchasing and package development, Ciba Pharmaceutical Products, Inc., and the institute's annual business meeting. Luncheon speeches on all three days and a Thursday evening reception and awards dinner will intersperse the seminars.

PI's fifth annual citations of an individual and a company for outstanding achievements in packaging technology, an award for the forum's outstanding technical paper, and scholarship fellowship presentations will highlight the dinner. Socially, the program will be "An Evening in Hawaii," also a United Airlines undertaking.

The institute hopes registration will exceed the 1,500 persons who attended the forum held in New York in 1957, a record for sessions not connected with a major packaging show. The last solo forum, last year in New York, drew 1,107.

Daily all-inclusive registration rates for PI members are $25 for Wednesday and Thursday, and $20 for Friday, including luncheon meetings each day. Daily all-inclusive registration rates for nonmembers are $10 higher for each day. A special member rate for all three days is $65 and, for nonmembers, is $95. The reception and dinner fee for individuals is $15, with a special husband-and-wife ticket at $25. All tickets are transferrable. Nonmember companies joining PI by the end of the year will have part of the three-day charge applied toward their Corporate Membership fee.

PI Vice President Iven G. Nichol, national accounts sales manager of Morningstar-Paisley, Inc.,

Institute Forum

Streamlined program of carefully coordinated seminars and speeches at PI's 23rd annual session, Oct. 18-20 at New York's Biltmore Hotel, will be keyed to the broadening of packaging technology

is forum chairman and Irwin Sipherd, quality control director of National Distillers Products Co., is awards dinner chairman.

The complete program follows:

Wednesday, Oct. 18

9:00 Registration

10:00 Call to Order
President's Address: L. H. ZAHN, *director, Purchasing & Package Development, Ciba Pharmaceutical Products, Inc.* Packaging Institute's Annual Business Meeting.

11:00 Presentation by United Airlines: Wings For Your Packaging Future, E. L. DARE, *manager of cargo development.*

12:15 Opening Luncheon

1:00 Keynote Address: The Broadening Horizons of Packaging Technology—WILLIAM M. MCFEELY, *vice president, Riegel Paper Corp.*

Three Concurrent Seminars

2:30 Research and Development—DR. FRANK C. CAMPINS, *president, Polymer Industries, Inc., seminar chairman.*
The Scope of Gases in Packaging Technology—EDWARD TARNELL, *president, Roger Williams Technical & Economic Services, Inc.*
The Path Ahead for Cushion Technology—RICHARD H. THOMAS, *president, Thomas Plastikraft Corp.*
The Engineering Approaches to Insulation Against Shock and Temperature—T. J. GRABOWSKI, *section head, industrial insulation research, Armstrong Cork Co.*
Vacuum Technology in Packaging —PHILIP J. CLOUGH, *director of metalized products program, National Research Corp.*
The Common Goal of the Technical Committees—DR. FRANK C. CAMPINS, *president, Polymer Industries, Inc.*

2:30 Bulk Packaging—D. B. CARMODY, *purchasing agent, Union Carbide Corp., seminar chairman.*
The Multiwall Paper Bag—A Bulk Package—THOMAS E. DOWLING, *packaging & labeling section, American Cyanamid Co.*
The Fibreboard Container as a Bulk Package—MILTON GRAY, JR., *materials-handling engineer, U. S. Industrial Chemicals Co.*
The Semi-Bulk Container—C. B. COLEMAN, *president, Fabricated Metals, Inc.*
Containerization—D. G. WARD, *general manager of the Container Division, General American Transportation Corp.*
Plastic Packaging Grows Up—WALTER CRAIG, *vice president, Plasticon Corp.*

2:30 Marketing—O. C. HOLLAND, *director of advertising, Printing Ink Div., Interchemical Corp., seminar chairman.*
How Color and Design Affect Consumer Preference—ROBERT G. NEUBAUER, *Robert G. Neubauer, Inc.*
Choosing Package Shapes and Sizes for Consumer Preference—MAXWELL B. ROGERS, *director of package design, Avon Products, Inc.*
The Right Packaging Materials and Consumer Preference —ALBERT KNER, *director, Design Laboratories, Container Corp. of America.*
The Growing Influence of Convenience in Packaging—WILLIAM S. FISHMAN, *senior vice president, Automatic Retailers of America, Inc.*
Predicting Consumer Preference in Packaging—(*speaker to be announced*).

Thursday, Oct. 19

9:00 Registration

Three Concurrent Seminars

9:30 Production Line and Machinery—IRA GOTTSCHO, *president, Adolph Gottscho, Inc.*, and R. ROSS KITCHEN, *Glenbrook Laboratories Div., Sterling Drug, Inc., seminar co-chairmen.*
Planning, Installing and Operating a Pressure-Packaging Line—J. P. BARRETT, *senior industrial engineer, S. C. Johnson & Sons, Inc.* Panel Members: L. BYRON KINGERY, *Lederle Laboratories;* NORMAN YAEGER, *Colgate Palmolive Co.;* F. W. POLITI, *Rexall Drug Co.*
Packaging Angel-Food-Type Cake Mixes—N. J. KLIPFEL, *division packaging and material-handling engineer, General Mills, Inc.* Panel Members: (*to be selected from list of outstanding Packaging Institute professional members*).
Existing Equipment, With Modifications, Utilized for Packaging Plastic Bottles—F. W. POLITI, *manager, St. Louis Laboratories, Rexall Drug Co.* Panel Members: *R.* FRUNDT, *McKesson & Robbins, Inc.;* NORMAN YAEGER, *Colgate Palmolive Co.;* J. P. BARRETT, *S. C. Johnson & Sons, Inc.*
Setting Up Pharmaceutical Packaging Operations Overseas—R. R. UMBDENSTOCK, *manager, pharmaceutical products, Pfizer International, Inc.* Panel Members: ROBERT H. DONEY, *Smith Kline & French;* WILLIAM W. BROWN, *Merck, Sharp & Dohme;* NELSON ZEIGLER, *Sterling Drug, Inc.*
Why and How Lederle Installed Its Own Low-Volume Aerosol Line—L. BYRON KINGERY, *assistant to packaging superintendent, Lederle Labora-* [*Continued on page 212*]

Linerless polyethylene cap

A linerless high-density-polyethylene cap—boasting advantages in economy and performance that suggest investigation by big-volume packagers of many types of liquids—is now being used by Merry Mfg. Co., Cincinnati, as a twisting closure for My Merry miniature playtime replicas of brand-name bottled products. It is reported to be among the first commercial applications of this thermoplastic cap.

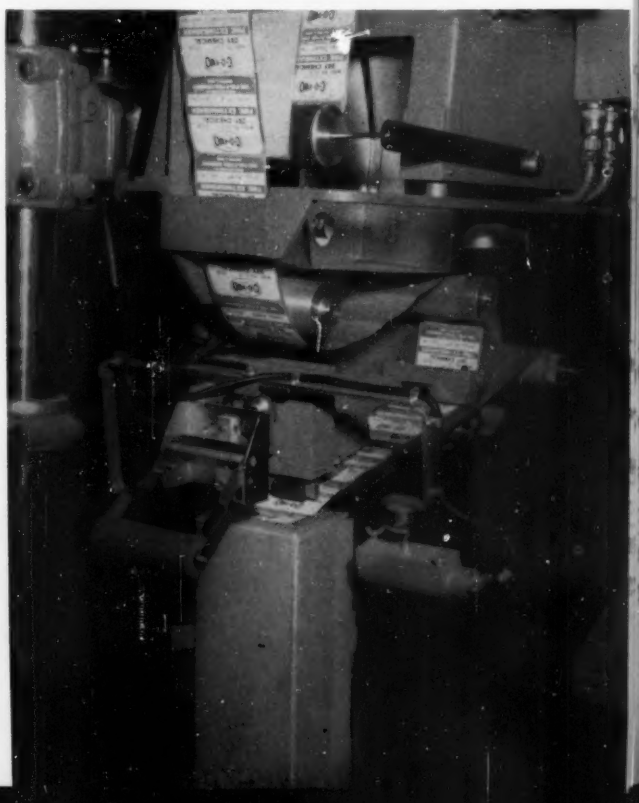
Significantly, the linerless high-density-polyethylene cap is compatible with the 14 different bottled fluids in the My Merry line. According to the packager, the thermoplastic closure—which replaces a thermosetting-plastic cap with liner—eliminates the former problems of closure cracking through capping-head stress and product leakage caused by inadequate tightening. High-density polyethylene's toughness and resiliency, plus the new cap's efficient sealing-ring action (see photo) are given credit for the new standards of performance. The linerless cap (patent pending) also is said to be lower in unit cost. Over-all, Merry Mfg. reports a 50% reduction in closure costs. *"Un-A-Top" linerless plastic closure by The Dover Molded Products Co., Dover, O., using Phillips Chemical's "Marlex" high-density polyethylene.*

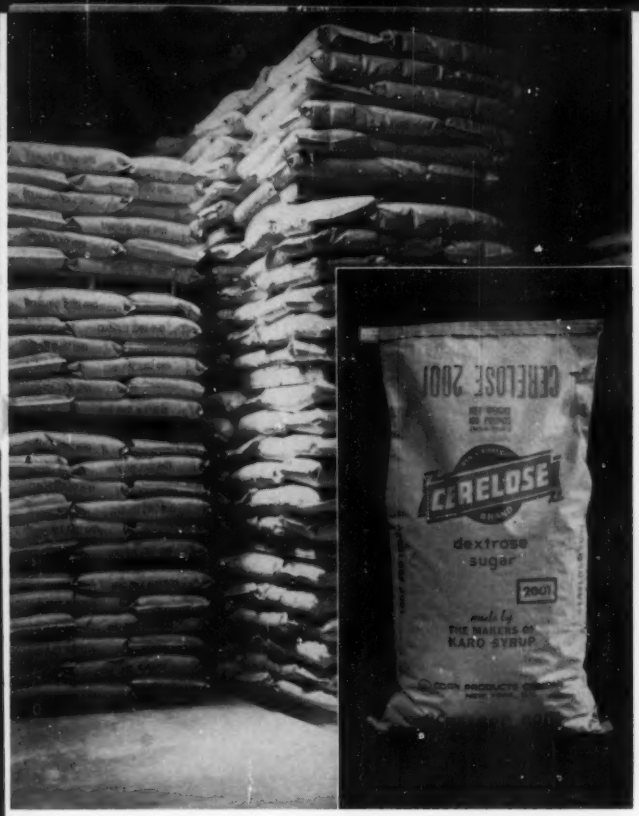
COST CUTTERS

Cost-cutting labeling unit

installation of an automatic pressure-sensitive-label imprinter-applicator machine as part of an automated production-line system reportedly is paying off in substantial labor and handling cost economies for the Fyr-Fyter Co., Dayton, O., manufacturer of fire extinguishers. The packager also says that the new unit's imprinting feature has sharply reduced initial label costs (since these items can now be purchased in large quantities without fear of waste through obsolescence) and inventory record keeping.

Formerly, all shipping-carton labeling was done by hand, using gummed, pre-printed paper labels. Many different types of labels had to be stocked to accommodate the company's broad line of extinguishers. Packaging expenses inherent in this operation have been greatly reduced by the automatic imprinter-applicator, says Fyr-Fyter. Essential label information is printed, as needed, right on the packaging line. Because the labels are pressure sensitive, an extra production step has been eliminated. The labels are applied to carton ends as the final step in the company's packaging operation. *"Sensomatic" automatic label imprinter-applicator by The Monarch Marking System Co., Dayton 3, O.*





Stretchable multiwall bag

Corn Products Co. has begun to ship dextrose corn sugar in extensible-kraft multiwall shipping bags. The company reports an appreciable reduction in bag breakage that not only minimizes its own losses from product wastage, but also upgrades customer-company satisfaction.

The stretchable paper—manufactured in a special process during which paper fibres are compressed to give the finished product a degree of elasticity—also has enabled Corn Products to switch from a five-ply, 210-lb.-basis-weight shipping bag to a four-ply, 190-lb. container, for additional savings in material costs and shipping charges.

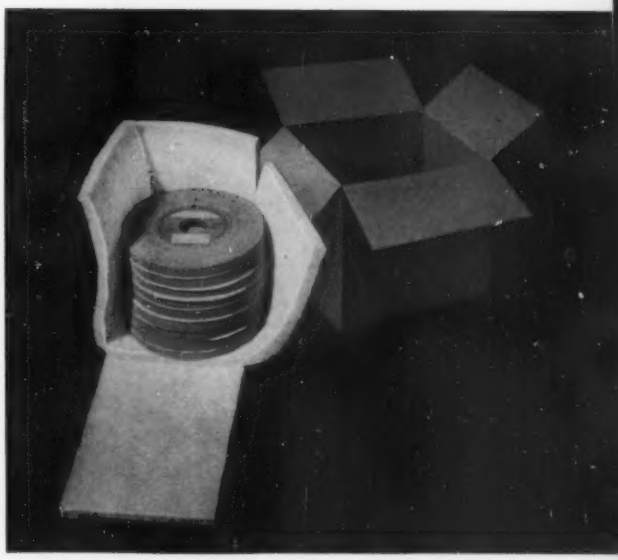
In test shipments conducted by the packager, the percentage of multiwall-bag damage in normal handling was reduced from an average of 1.50% for regular five-ply bags to 0.17% for the extensible-paper bags. Bag scuffing also was reduced significantly by the adoption of stretchable kraft paper, according to the company.

Corn Products also notes that the smooth-surfaced extensible-kraft bags stack well and provide an attractive background for printed design. *Extensible-kraft bags produced under license from Clupak, Inc., 530 Fifth Ave., New York 36.*

Pre-cut fabric cushioning saves 50% on labor and mailing

Industrial packagers whose products come in a variety of sizes may be interested in the cost-cutting experience of the Grinding Wheel Div. of Electro Refractories & Abrasives Corp., Buffalo. The company reports a 50% reduction in shipment-packaging labor and mailing costs since adoption of a new cushion-packaging technique.

The packager formerly achieved protection for its line of abrasive wheels by stuffing shipping cartons with wadded cushioning. It was a time-consuming job and it added excess weight to the package, says the firm. In the new operation, a lightweight non-woven fabric cushioning—pre-cut to company specifications—is used. Disks of the material are sandwiched between the wheels as they are stacked in the shipping carton. Two strips of the same material—pre-positioned in the carton at right angles to each other—then are folded up over the top of the stack, to protect the products from all angles. The material's light weight cuts parcel-post charges 50% compared with the cushioning formerly used and the pre-cut pieces have chopped labor costs in half, says the packager. *"Tufflex" cushioning material by Wood Conversion Co., First National Bank Bldg., St. Paul 1.*



SHIPPING BAGS OF

From Italy comes a new contender in the plastic-shipping-container field that may be a winner on price and performance. It offers the bonus of a valve that speeds filling on standard equipment

The kraft-based multiwall shipping bag, which already has met with competition from a polyethylene film bag, now faces still another all-plastic challenger with interesting possibilities: a valved, heavy-duty polyvinyl chloride bag, which has recently made its appearance in Italy.

The PVC bag has been introduced on the Continent, in separate applications, by two Italian PVC resin producers who turned to PVC rather than polyethylene and are converting the material into 110-lb. transport and storage containers for dry chemical fertilizer, which each also manufactures. The companies are Montecatini and Sicedison S.p.A., both headquartered in Milan.

Performance reports after the first year of commercial use indicate that the tough new bulk-quantity film shipper—with wall thickness of 7 to 10 mils—offers a high degree of moisture protection to dry hygroscopic chemicals and agricultural products. In this first dual application, the moisture-barrier property is particularly important, because many European farmers must store fertilizer out of doors or in inadequately sheltered areas.

Equally significant to the potential of the heavy-duty PVC bag as a general-purpose shipping container for a broad variety of dry, free-flowing products is the fact that it is said to be competitive in price with polyethylene or kraft-based multiwall bags possessing comparable barrier properties. PVC—used more widely in Europe than it is here—is basically a low-cost resin.

And the development of a workable valve opening in a film bag may encourage investigation by packagers on this side of the Atlantic who have long been working toward such a refinement.

Although so many factors are involved that pre-

COURTESY SICEDISON.

Standard filling equipment *is used for valved PVC bag, eliminating need to invest in new or modified machinery. Toughness of the plastic film minimizes bag damage in filling and subsequent handling.*

Simple, integral valve *is shown at top right in each of these three PVC bags for Montecatini dry chemical fertilizers. Pre-sealing the bag top and bottom eliminates need for the touchy final sealing operation.*

PHOTO COURTESY MONTECATINI.

PVC

Heavy-duty PVC bags, *with wall thickness of 7 and 10 mils and holding 110 lbs. of dry chemical fertilizer, are produced and used by both Montecatini and Sicedison. Excellent seal strength of thick-walled PVC, competitive price (14-18 cents each) and good WVT barrier properties led the Italian firms to use this bag.*

cise cost comparisons are virtually impossible, available data do permit an illuminating evaluation. Estimated prices in Italy for medium-large quantities of the 110-lb. PVC valve bag developed by the two Italian firms range from 14 to 18 cents each —reportedly lower in cost than multiwall paper bags with comparable barrier properties.

Heavy-wall polyethylene bags of the same size and in similar quantities would be somewhat more costly than PVC for the Italian users. However, PVC production in the United States still is comparatively small scale. Therefore, PVC in this country is not yet so economically attractive as it is in Europe. In the first United States application of 10-mil polyethylene bags (50-lb. capacity, open mouth), price ranged from 20 to 30 cents each.[1] But recent reductions in the price of polyethylene resins have lowered the cost of heavy-duty polyethylene shipping bags.

In a more recent application by a produce packager, thin-walled (3 mil) high-density polyethylene bags of 50-lb. capacity were priced at about 15 cents each.[2] Parenthetically, many industry experts in this country believe that such a tough, thin-wall bag, offering an adequate water-vapor-transmission barrier as well as greater heat-sealing ease than can be achieved with heavy-walled polyethylene bags, represents polyethylene's best bet for gaining really widespread user acceptance in the field of flexible shipping containers.

Important as it is, the favorable price factor was only one of the determinants that led the Italian supplier-packager companies to turn to PVC in the face of the proved performance of polyethylene in other countries, notably the United States. One of the chief reasons for the selection of PVC, say Montecatini and Sicedison, is excellent sealability in heavy gauges—a critical requirement in thick-walled plastic bags and even more so in the giant-sized bags needed to hold 110 lbs. of fertilizer.

Effective heat sealing of heavy-duty polyethylene is a long-standing technical problem, although Montecatini has just announced development of a successful method of heat sealing thick-wall valved polyethylene shipping bags. PVC, however, because of its relatively narrow melting range, is sealed via a "cold-jaw" electronic method which is reported to effect a skip-free seal of superior strength.

Preliminary tests run by the companies are said to have revealed that, in bags of equal wall thickness, the PVC proved to be more resistant than did

[1] See "Heavy-Duty Polyethylene Bags," MODERN PACKAGING, May, 1958, p. 198.
[2] See "Film Shipper for Produce," MODERN PACKAGING, May, 1961, p. 119.

polyethylene film to perforation and tear damage.

The PVC shipping bag shares with polyethylene the considerable sales advantages of an agreeably printable surface and long-term re-use value. Sicedison, reporting on a consumer survey conducted five months after initial distribution of plastic-bagged fertilizer, offers proof of the re-use appeal among economy-minded European farmers. More than 90% of the customers interviewed, says the company, use the empty plastic bags for a variety of shelter and lining applications around the farm.

The most significant difference between the polyethylene shipping bag that has evolved in this country and the new Italian bag of PVC is the latter's simple, integral valve that speeds filling by eliminating final sealing. It is also claimed to offer three other major advantages over the open-mouth sack:

1. The containers can be handled on existing automatic multiwall-valve-bag filling equipment, eliminating need for new or modified machinery.

2. Because the bag is pre-sealed top and bottom (except, of course, for the valve), there is no possibility that product discharged into the bag will cling to the sealing surface and lead to unsatisfactory closure as would occur with open-mouth sacks.

3. Closed tightly against the bag's side wall by product pressure in the filling operation, the unsealed valve permits gradual and complete escape of trapped air and eliminates the need for venting.

The valve is formed automatically when the tubular PVC film is cut into bag lengths. In a manual operation—now being automated in the interest of lower packaging costs—the valve is folded down inside the pre-printed tube, which is then electronically sealed top and bottom, leaving only the valve open. Montecatini and Sicedison report that the valve bag retains its moisture resistance even after prolonged exposure to rain or high humidity.

Stringent tests of PVC bag performance, in comparison with multiwall paper bags, were carried out by each of the two Italian companies. Some of the results which they report include:

- In drop tests from heights varying from 4 to 12 ft., the PVC bag has been demonstrated to be far more resistant to rupture. At maximum height, the PVC bag failed at the seal only after 60 to 80 drops, whereas the standard multiwall bag usually was found to split at the first 7-ft. drop.
- The PVC bag performed at maximum efficiency in a temperature range of from minus 4 deg. F. to 140 deg. F. Below a temperature of minus 4 deg. F., the film became stiff and subject to cracking under stress. Negligible film stretching occurred at temperatures above 140 deg. F. To overcome these slight problems, Montecatini and Sicedison are researching the development of PVC film with a wider stability range at extreme temperatures.
- An outdoor weathering test, under way since October, 1958, reveals no chemical or physical alteration of the product contained in the film shipper. As far as the bag itself is concerned, prolonged exposure to the elements causes a partial loss of plasticizer and some fading of the print, without substantially affecting performance properties.
- Land and sea transport tests have proved the PVC bag's durability under conditions of rough handling, cargo shifting and rapid fluctuations of temperature and humidity—all of which are likely to be encountered in normal shipping operations.

Adding up all the evidence, it would appear that polyvinyl chloride film may deserve its initial recognition as a vigorous and promising candidate for a broad range of shipping-container applications.

Two postscripts to the pioneering investigation by Montecatini and Sicedison support their expectation of a bright future for this heavy-duty plastic bag:

1. In 1960, the two companies marketed a total of some 5,000,000 PVC shipping bags of fertilizer; they anticipate a 40,000,000-unit market (encompassing other dry products as well) by year end.

2. The Montecatini and Sicedison PVC shipping bags both won Eurostars for packaging excellence in the 1960 competition sponsored by the European Packaging Federation. Symbolizing the year's most significant European packaging developments, only 17 such awards were presented last year.

PHOTO COURTESY SICEDISON.

Three-year weathering test *conducted by Sicedison proves performance of PVC shipping bag. The company reports no physical or chemical alteration of the dry product in that span and only a partial loss of bag plasticizer, despite prolonged exposure to sun, rain, temperature changes.*

"Knox Glass consistently delivers a top-quality bottle," says important eastern brewer

"Although we started using Knox Glass products to bottle our various sizes and brands of beer only three years ago, Knox has since become the major supplier of our returnable and non-returnable bottles," says the bottling superintendent of one of the eastern seaboard's most important and respected breweries.*

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"Working with the local Knox Glass representative," he continued, "we have recently developed a method of palletizing our cartons so they can be taken directly from the vans and placed on the conveyor lines with our fork lift trucks. This has substantially speeded production and —combined with Knox's excellent delivery—has saved us untold thousands of dollars in production time.

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Ideas from the military

Meal for six soldiers *is compactly packaged in protectively lined individual containers for each item on the menu, all contained in a standard corrugated shipper (left). Three-year protection for freeze-dried foods in individual cartons is provided by inner flexible lamination of polyvinyl chloride, aluminum foil and polyester. Bread comes in a tinplate can, oleomargarine in a collapsible metal tube (also left). Freeze-dried foods are newly important for consumer markets.*

Imagine a soft-goods package so reduced in bulk that four take up the space normally required by one. Or a food carton so strong it can be safely dropped from a plane, so protectively lined it has a three-year shelf life and so versatile it doubles as the cooking utensil for the product.

Although both containers are being produced, neither is yet a practical commercial package despite their apparent appeal to packagers, dealers and to consumers. Rather, they are military containers now undergoing tests. Some day they may have commercial counterparts, but more important is the fact that commercial packaging should profit from the many ideas and new techniques which are now going into their development.

These two projects are among currently significant activities in one of the largest continuing package-research programs in the United States—that carried on by the Quartermaster Corps' Chicago-based Food & Container Institute for the Armed Forces. F&CI's studies are, of course, aimed specifically at military requirements. But commercial and military packaging share many common problems and solutions. F&CI is indebted to commercial packagers for many methods and much useful information; commercial packagers may draw on the reservoir of unclassified data compiled by F&CI. This relation typifies the idea exchange so widespread in the packaging field and so helpful to all.

F&CI's two most recent developments are:

1. "Contour" packaging of garments and other fabric equipment which reduces their cube as much as 75%—a reflection of a current commercial trend to reduction in package size to conserve shelf space.

2. A bag-in-box package which uses a flexible lamination of polyvinyl chloride, aluminum foil and polyester, and provides such a super barrier that foods remain edible for more than three years. This lamination has proved most effective among hundreds of possible combinations studied by F&CI for

Adapting techniques from commercial packagers who may learn some new tricks in return, the Quartermaster Corps skin packs fabric items in one-quarter the usual bulk, tests a tough food carton with three-year life

the protection of new freeze-dried food products.*

Actually, both ideas represent military adaptation of commercial packaging techniques. But F&CI is using them so imaginatively that commercial packagers may want to borrow them back.

Since F&CI is a research group, its work is almost exclusively with prototype materials and machines. Both developments are still in test stages and so have been manually or semi-automatically applied. Field tests are now under way, however, and there is no reason to doubt that workable production models of the two machines needed will be developed as soon as Armed Forces approval is obtained.

Contour packaging of clothing

F&CI's contour packages are skin packs in principle, except that the usual backing board is replaced by a backing of the film itself, forming a taut, flat, transparent pouch. Cube of the packages is reduced through removal of entrapped air in the fabric. With clothing there is no need to draw a complete vacuum (as is necessary with food products), but most of the excess air is removed.

The technique offers few size-reduction advantages for cottons and synthetics, since these fabrics do not tend to retain air. But it is effective for wool. In tests on all sizes of woolen garments, socks, for instance, become 40% less bulky, sleeping bags are reduced in size by as much as 75%. For all fabrics, the technique waterproofs the packaging and prevents mildew and insect infestation.

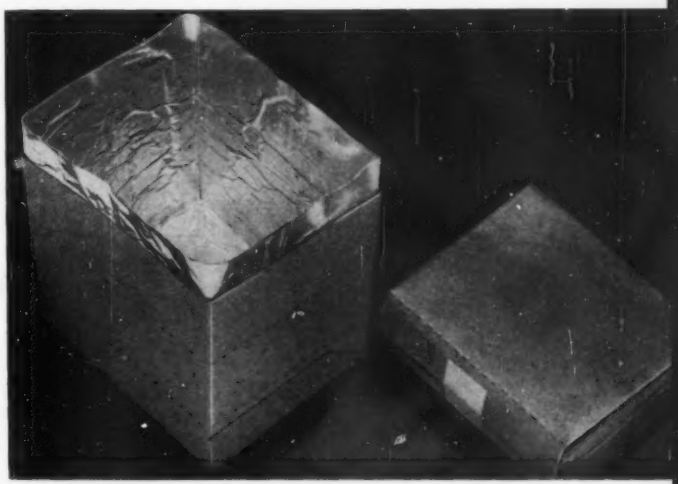
Contour packaging also introduces unitizing of garments. Garments may be multipackaged in the units normally issued each time to each man—only one parka liner, for example, but two undershirts or 10 socks. Garments are wrinkled slightly, but when removed, spring back into shape quickly.

F&CI technicians have experimented with most available films, coatings and laminations. Best results have been obtained from a 3-mil lamination consisting of 2 mils of polyethylene for heat sealability and 1 mil of polyester for strength. Thinner film is not strong enough for rough military treatment. However, commercial packagers of knitwear, blankets, etc., could probably use a 2-mil film.

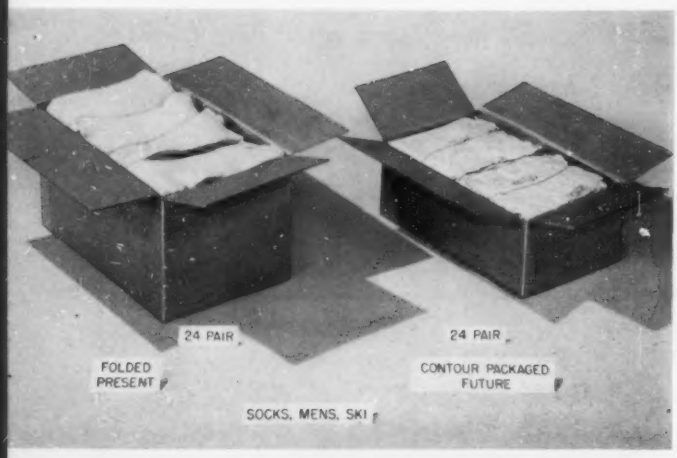
Since F&CI found no vacuum-forming machine specifically for clothing, it modified a standard

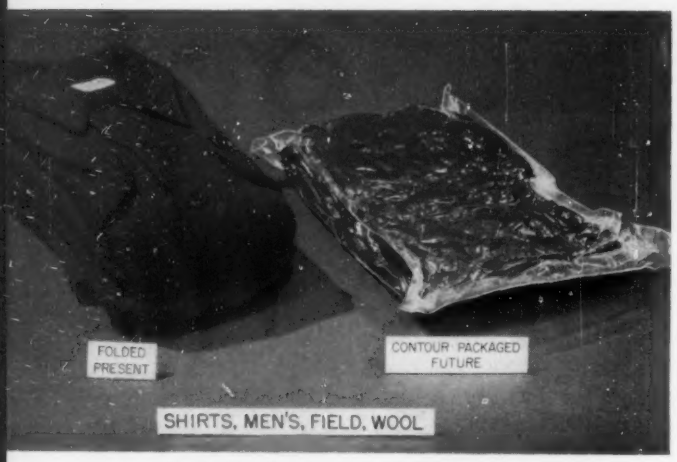
*See "Dehydration Comes Back," Modern Packaging, July, 1961, p. 89.

Clothing is compression packed *in contour pouches of a polyethylene-polyester lamination. Removal of entrapped air in the fabric reduces bulkiness. Here, pairs of socks are removed from long-time storage pack. Compression packaging has recently been adopted by manufacturers of two major consumer paper products.*



Barrier qualities *of individual food cartons are enhanced by flexible plastic-foil lamination that forms a gusseted bag spot glued inside fibreboard carton. By means of scored lines, the carton is folded (right) to about one-third the original size, telescopes out (left) to its original size and shape for reconstitution of freeze-dried food by addition of hot water.*





Space saving *in contour packaging ranges from 40% for socks (left) to 50% for wool shirts (right) and 75% for sleeping bags.*

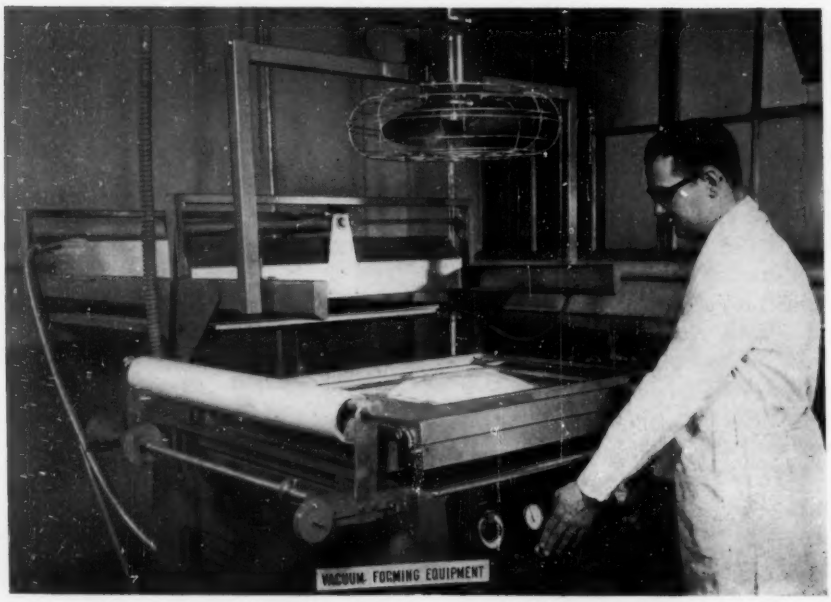
semi-automatic machine originally designed for use with a perforated backing card. The machine's vacuum port is centered in the lower platen in the usual way. But use of a bottom ply of airtight film instead of a card covers the vacuum port and prevents drawing of a vacuum. So F&CI technicians have added a plywood frame and platen with holes drilled in the sides for evacuation of air from the four sides of the package before it is sealed. Heat is applied from a top-mounted, movable platen supplied as standard equipment. F&CI pulls about 25 lbs. of vacuum and uses a sealing temperature of about 300 deg. F. with a 25-sec. dwell time.

The modified machine is suitable, of course, only for laboratory work. For production, the plywood frame and platen would be replaced with metal parts and F&CI recommends a roll feed with top and bottom webs. Pre-warming the top web would shorten dwell time considerably, as would application of heat from both top and bottom during sealing, instead of the present top heating only.

F&CI feels its technique has good potential for commercial as well as military packaging use. Although it has been developed specifically for packaging clothing, the Institute anticipates that contour packaging may also be applied to metal parts and other military material, solely for protection.

Super barrier for food

F&CI's new food package consists of a gusseted bag of the flexible, super-barrier material heat sealed at both ends and spot glued inside a carton of 40-pt. fibreboard. When one end of the carton and then the inner bag are opened, hot water may be added directly to the [*Continued on page 230*]



Compression-packing unit, *basically a standard semi-automatic vacuum-forming skin-packaging machine, withdraws air from the fabric products and heat seals them between film webs. In place of the usual bottom air-evacuation port, QMFCI technicians built in a device to remove air from four sides of film pack before sealing.*

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Effect of moisture on carton scores

Study shows that perforated scores will contribute to the efficiency of carton set-up and filling operations only when moisture content is at low level. *By William Schoenberg**

It is generally believed that cut scores and perforated scores in folding cartons bend with less force, have lower springback values and square up better and easier than standard or regular scores, and that cut and perforated scores, therefore, insure smoother carton performance on packaging lines. While studying the effect of moisture variation upon opening force and opening-force springback, and upon score bend and score-bend springback and, thereby, its effect upon carton performance, evidence was uncovered that indicated that such is not necessarily the case. The test, as reported in this paper, was undertaken in order to prove or to disprove this point.

Samples were carefully cut and procedures planned to eliminate the effect of all variables except the scoring variable. One lot was maintained at a low, the other lot at a high relative humidity. The drier lot was within ±0.1 of 5.4% moisture content (MC) when tested. The wetter lot varied from 10.1% MC to 10.8% MC, averaging 10.6% MC when tested. Neither MC is unusual during packaging operations. Tests on both the high- and low-moisture-content samples were conducted upon an Ohio Boxboard Score Bend Tester in rooms with conditioned atmosphere in which the test specimens were at equilibrium.

Standard Ohio Boxboard Score Bend Tester procedures were followed for measuring score bend and score-bend springback, board stiffness and board-stiffness springback (TAPPI RC Method 284—Packaging Institute PCTM "in process").

The test results were subject to the Td[1] statistical analysis which proved that:

1. *At the lower moisture content,* perforated scores have significantly lower values for score bend and for score-bend springback than do corresponding standard scores, and cartons with perforated scores will perform significantly more smoothly and better on packaging lines than will cartons with corresponding standard scores.

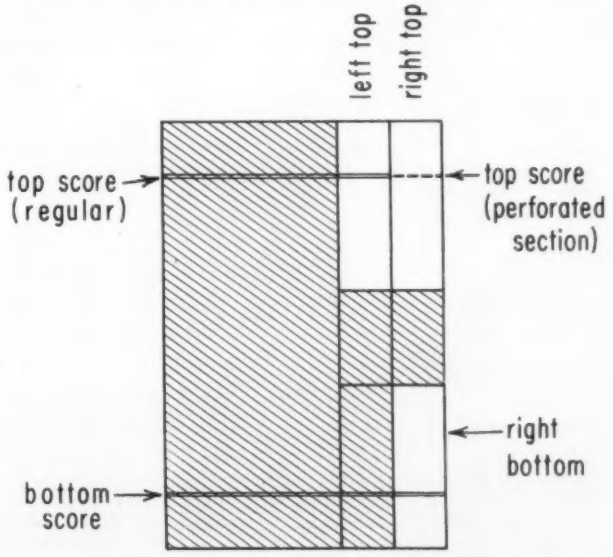
2. *At the higher moisture content,* perforated scores have *no* significant advantage over standard scores and cartons with perforated scores *will not* perform significantly smoother or better on packaging lines than will folding cartons which have corresponding standard scores.

Further experimentation should be undertaken to substantiate these findings. However, if correct, the reported experiment establishes that:

A. When humidity is present at the packaging line, cartons with perforated scores have no significant advantage over those with standard scores.

B. Packaging plants where the relative humidity

Figure 1. *Diagram shows the portions of carton panels used in tests. Shaded portions were discarded.*



*Paper Industry Instruments, Cleveland, Ohio.

[1]"Td" is described in the Statistical Manual published by the U.S. Naval Ordnance Test Station and in Dixon and Massey, An Introduction to Statistical Analysis (McGraw-Hill, 1951).

is usually high—such as frozen-food, beer, meat, vegetable, milk and similar packaging plants—may well need some other means than perforated scores to insure the smooth and efficient performance of their folding cartons, carrier cartons, etc., on the package filling and sealing lines.

The purpose of this test is to determine the effect of moisture-content percentage upon cartons with perforated scores in comparison with its effect upon cartons with regular scores.

The reason for making the test was to determine the effect of variations in moisture-content percentage upon the bending properties of standard scores vs. its effect upon perforated scores, since most scores are cut or perforated in order to improve the bending properties of scores—to cause them to bend more easily during the packaging operation.

Preparation for testing

One lot of cartons was divided into two parts by withdrawing alternate cartons from the lot. One lot was then hung in a room with a low relative humidity and the other hung in a room with a high relative humidity. After being humidity conditioned for 10 days, the cartons were tested for moisture-content percentage. All cartons in the dry room averaged within ±0.1% of 5.4% MC. Cartons conditioned in the high-humidity room varied between 10.1 and 10.8%, averaging 10.6% MC.

The cartons used in this test were 0.032-in. cylinder board to which a standard lightweight printing paper had been laminated on what became the outer (printed) surface of the sheet.

The perforations used in this instance were intended more for "easy opening" of the final package than for ease of bending the score. However, it was not intended that the perforations should make the scores more difficult to bend. On the top score right end, front of carton, there are 10 perforations, each 1/8 in. long and approximately 1/64 in. wide, with 1/8 in. of standard score between perforations. The perforations do not cut completely through the cartonboard.

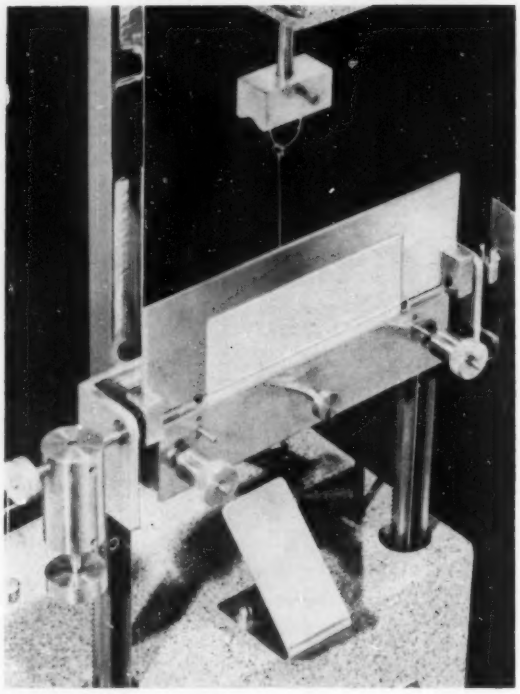


Figure 2. *Measuring score bend and score-bend springback. The test specimen is correctly positioned here for score bend.*

A sample cutter was brought into each of the humidity-conditioned rooms. Three test specimens, as illustrated in Figure 1, were cut from each carton in each of the rooms.

A strip 5 in. wide was cut from the front of each carton, running the full length of the carton (top flap, panel, bottom flap). This strip was slit, lengthwise, into two thinner strips each 2½ in. wide. The right-strip's top score was the perforated score. The left-strip's top score was standard. As the top scores in these two strips were actually a continuation of the same score line, any significant difference in the performance of the top scores in these two strips must be attributed to:

1. Differences between the perforated score and the standard score, or

2. Cross-machine difference in the cartonboard (although a consistent significant difference within 5 in. is unlikely to occur).

Each strip was then cut into three pieces. The top and bottom pieces were exactly 8 in. long. Since both bottom and top score lines were 2 9/16 in. from

Table I: Test values for bending regular and perforated scores at both high and low moisture contents

(All samples taken from front panel and front flaps)

	Left top (Regular score)		*Right top (Perforated score)*		*Right bottom (Regular score)*	
	Bend	*Spring-back*	*Bend*	*Spring-back*	*Bend*	*Spring-back*
Wet—10.6% moisture						
Average	580	498	580	517	600	540
Maximum	620	540	660	580	630	610
Minimum	530	450	540	480	530	470
Range, in. gms.	90	90	120	100	100	140
Range, %	15.5	16.7	22.2	17.2	18.9	29.8
Dry—5.4% moisture						
Average	342	297	273	239	335	293
Maximum	360	320	300	260	350	310
Minimum	310	280	240	205	310	280
Range, in. gms.	50	40	60	55	40	30
Range, %	13.9	12.5	25.0	26.8	12.9	10.7

NOTE: Except for range %, all values are reported as inch grams.

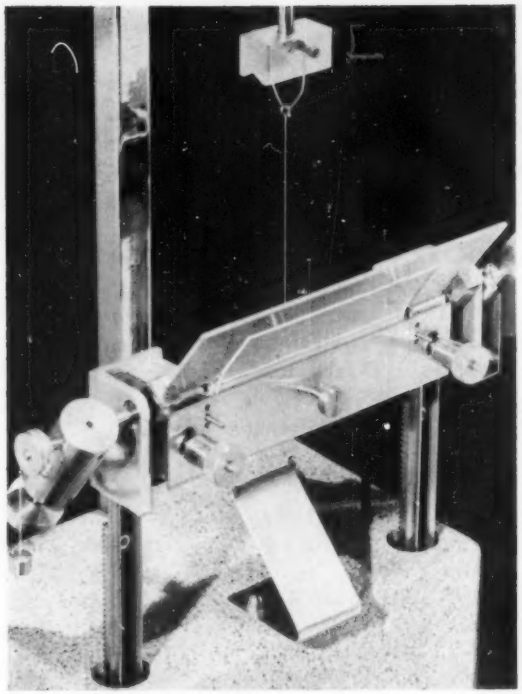


Figure 3. *Note how the test specimen conforms to relationship of tilting, back and clamping plates during score bend.*

the outer edge, the score lines were in the same relative position in each of these pieces or strips.

The central section of each of the long strips was discarded, as was the lower section of each of the left pieces or strips.

The scores in the top and bottom pieces of the long right strip were in exactly the same position relative to the machine direction in the cartonboard. Thus, any significant difference in the performance of these two scores must be attributed to the differences in the scoring, not to differences in the board.

Also, if both *top left* score and *bottom right* score performed similarly, and if both performed differently from the *top right* score, then this difference in score performance could be directly attributed to the difference between the perforated and the standard scores. However, if all three scores performed reasonably close to one another, then the perforations could be assumed to have no effect upon carton performance on package fillers and sealers.

Procedure

A Model B Ohio Boxboard Score Bend Tester (Figures 2 and 3) was used to evaluate the scores in all test specimens. The instrument was brought into each of the conditioned rooms and all tests were conducted within the atmosphere with which the specimens to be tested were at moisture and temperature equilibrium.

Ohio Boxboard Score Bend Tester standard procedures for score bend and score-bend springback board stiffness (with grain—MD) and board stiffness (MD) springback were followed on each test specimen which was used:

1. Instrument was checked to make certain it was in balance and correctly calibrated.
2. Test specimens were inserted behind the clamping plate and centered, with the long dimension vertical. Clamping plate was tightened.
3. Center of score was aligned with bending axis (front bottom edge of tilting plate).
4. Score was bent 90 deg. and held at 90-deg. bend for a period of 10 seconds.
5. *Maximum-reading* pointer value was recorded as score bend.
6. *Pointer factor*[2] was added to the *pointer value* and the total recorded as score-bend springback.
7. Tilting plate and carriage assembly were returned to starting position, clamping plate loosened, test specimen raised within the clamping plate until the bottom edge of the test specimen was aligned with the bottom edge of the clamping plate, and the clamping plate was then tightened.
8. Board (test specimen) was bent 90 deg. with the bending axis in the machine direction of the test specimen and was held at this 90-deg. bend for a period of 10 seconds.
9. *Maximum-reading* pointer value was then re-

[2]"Pointer factor" is the difference in the readings of the pointer and the maximum reading pointer when the latter is zeroed and the former correctly aligned for testing.

Table II: Td values comparing regular and perforated scores*

Sample identification	*(A) High moisture content (10.6% moisture) test values vs. low moisture content (5.4% moisture) test values*		*(B) At high moisture content, 10.6% moisture*		*(C) At low moisture content, 5.4% moisture*	
Score bend	*Bend*	*Spring-back*	*Bend*	*Spring-back*	*Bend*	*Spring-back*
Left top (regular)	1.700	1.546				
Right top (perforated)	1.705	1.858				
Right bottom (regular)	1.893	1.453				
Left top (regular) vs. right top (perforated)			0.0	−0.100	0.627	0.611
Right bottom (regular) vs. right top (perforated)			0.091	0.096	0.620	0.635
Left top (regular) vs. right bottom (regular)			0.105	−0.105	0.077	0.057

*Differences of consequence do exist where above figures exceed 0.388 (see "A" above). Differences of consequence do not exist where above figures are less than 0.388 (see "B" and "C" above).

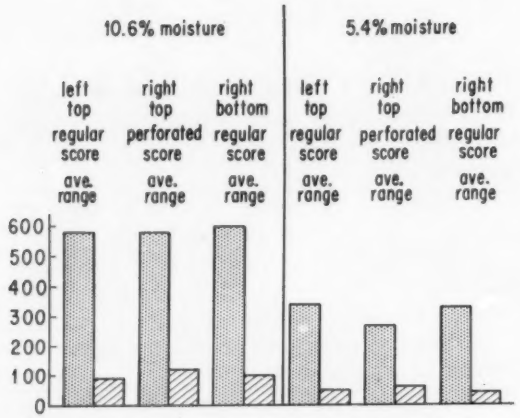


Figure 4. *Score-bend test values for regular and perforated scores at both high and low moisture contents.*

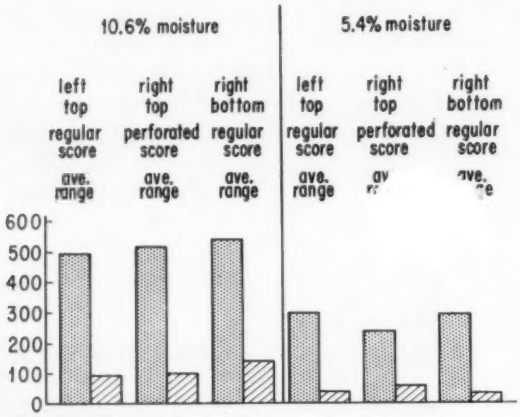


Figure 5. *Springback test values for regular and perforated scores at both high and low moisture contents.*

corded as board stiffness, machine direction (MD).

10. *Pointer factor* was added to the *pointer value* and the total was then recorded as board-stiffness (MD) springback.

11. Instrument was returned to starting position for handling the next test specimen.

The foregoing procedure was carefully followed for test specimens in both low-relative-humidity and high-relative-humidity rooms.

Results were tabulated and are shown in Table I and in the charts, Figures 4 and 5.

In order to determine whether or not a significant difference was present between (A) corresponding wet and dry test values, (B) the scores in the wet test specimens (10.6% MC) and (C) the scores in the dry test specimens (5.4% MC), the proper test values were subjected to the formula for the Td test for small sample sizes (no more than 10 test specimens in each test lot).

The formula for this Td test is

$$Td = \frac{\overline{X}_1 - \overline{X}_2}{W_1 + W_2}$$

where $\overline{X}$'s represent the *averages* of the samples and W's represent the *ranges* of the samples. The hypothesis that we are testing is that the sample means are equal, that is, that $\overline{X}_1 = \overline{X}_2$. This hypothesis may be rejected if Td exceeds the critical value. When six test specimens comprise each sample lot tested, the critical value is 0.388. Thus all figures in Table II that do exceed 0.388 show that a difference of consequence *does* exist between the values being compared. Likewise, all of the figures appearing in Table II that do *not* exceed 0.388 show that a difference of consequence does *not* exist between the values which are being compared.

Thus, from Table II:

A. The Td figures in the A columns show that a significant difference *does* exist in the forces of bend and of springback for corresponding scores when *wet* (10.6% MC) *vs.* when *dry* (5.4% MC).

B. The Td figures in the B columns show that, in the *higher* moisture range (10.6% MC), there is *no* significant difference in the force required to bend any of the scores, standard or perforated, or in score-bend springback.

C. The Td figures in the C columns show that, in the *lower* moisture range (5.4% MC), a significant difference *does* exist between the forces required to bend regular (standard) scores and the forces required to bend perforated scores. Corresponding differences *do* also exist between corresponding score-bend springback measurements.

Conclusions

Thus, we were able to *prove* statistically what appears true in Table I and in the charts, Figures 4 and 5, namely, that:

1. When cartons are in a low moisture-content percentage range, it is easier to run cartons with perforated scores on package filling and sealing machines than to run cartons with standard scores. The forces required for score bend and for score-bend springback are significantly lower for perforated scores when the MC range is low than for standard scores under similar MC conditions.

2. When cartons are in a high moisture-content percentage range, there is no advantage when running cartons with perforated scores on package filling and sealing machines over running cartons with standard scores. Then the forces required for score bend and for score-bend springback are substantially the same for the perforated scores and for the standard scores.

3. Since moisture contents of either 5.4% or 10.6% are not uncommon in folding cartons, carriers, etc. when they are run on package filling and sealing machines, some means other than perforated scores is required for cartons to run as readily when carton MC is high as when carton MC is low.

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Standards for electrical diagrams

Complex circuitry of today's packaging machinery calls for a code of symbols and supplementary data that will speed maintenance and cut down time. A discussion and proposal. *By Frank R. Cinco**

Packagers, like many other users of specialized machinery, are experiencing the growing pains of modern machine design which have changed electrical-equipment needs from a basic drive motor and manual starter to complex circuitry.

Today's systems use many motors (some of which may be variable- or adjustable-speed drives), magnetic starters, relays, limit switches, timers, solenoids and pushbuttons. In addition, electronics, solid-state devices, servos and high-frequency currents are being increasingly employed for detection, signaling, control and programing functions.

With the former simple systems, wiring diagrams were not necessary. But with modern circuitry and the increased complexity and exactness of packaging-machinery operations, it has become more and more necessary to furnish a definite means of communication between users, manufacturers and the servicing personnel so that all may understand the thoughts and methods used by the design engineer.

To present this information effectively, the wiring diagram for electrical equipment must be complete and must be expressed in a common language that can be easily understood by all packaging engineers.

Objectives

To achieve this uniformity of expression, we must first review briefly the exact purpose of a wiring diagram. It should contain the following:

1. Information showing the manner in which all of the various controlled devices are planned to function with respect to one another.

2. Sketch of the physical layout of all electrical devices that have been used on the control panel of the machine as well as on the machine itself.

3. Illustration of how these devices are physically interconnected to one another.

4. Supporting information, such as a material list of devices and a sequence of machine operation.

*Chief Electrical Engineer, Package Machinery Co., East Longmeadow, Mass.

Frank R. Cinco is the current chairman of the Packaging Industry Subcommittee of the American Institute of Electrical Engineers, which is working to establish broad standards for the electrical components used in packaging equipment.

Need for simplification

Wiring diagrams should be simple. They should distinguish between the electrical functioning of the devices and the physical layout of the electrical system. Hence, a complete wiring diagram should be broken down into two sections: (1) the elementary or schematic diagram and (2) the interconnection or machine diagram.

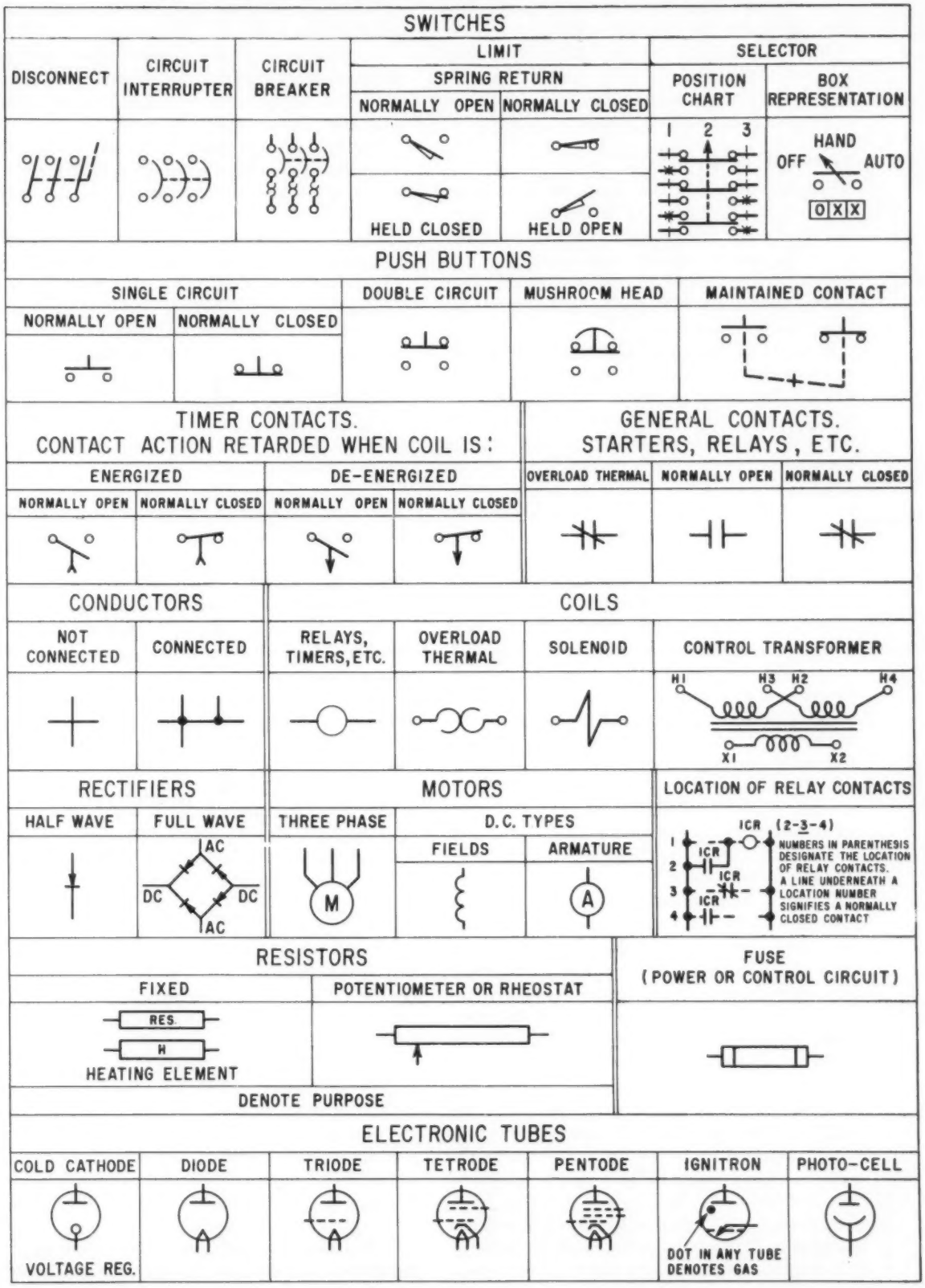
The elementary diagram is the true source of operational and sequential information and is the engineer's or designer's working drawing. Basically, it is merely a simple line drawing showing elements in their proper *electrical* location, portrayed in functional relationship to each other in the circuit, rather than in *physical* arrangement. For instance, a relay coil may be properly shown in its electrical position and at the same time be far removed from the contacts that it operates.

The elementary diagram forms a common meeting ground between the machine designer, the control engineer and the trouble shooter.

The most understandable method of representing such electrical devices is through association with pictures or symbols. It should be noted, however, that it is not absolutely necessary to represent each and every single device with its own symbol.

All electrical components fall into four basic classifications: (1) contacts, which establish the open or closed condition of the circuit, (2) conductors, that carry electrical energy, (3) operated members, such as motors, timers and solenoids, that convert electrical energy into rotary or linear motion and (4) conversion devices, including such

Figure 1. Standard graphical symbols for electrical diagrams



equipment as transformers, capacitors or rectifiers, that will modify the electrical energy.

Instead of devising new symbols for the packaging field, let us consider what some of the other large industrial groups and the American Society of Graphic Symbols have adopted as standards.

Standards to go by

Starters, contactors and relays all function the same way and all have a coil and contacts. Conventionally, the coil is represented by a small circle (see Figure 1) and the normally open contacts are represented by two vertical parallel lines. Normally closed contacts are indicated by adding a slanted line across the symbol.

In terms of operation, pushbuttons are merely two contacts and a manually operated jumper bar which either makes or breaks a circuit; these can be represented by lines and circles. Selector switches follow the same basic configuration, except that in order to completely identify the cam action and the resulting contact action, it is sometimes necessary to add further explanatory information, especially with three- or four-position selectors.

With two-position switches, if the arrow indicates the contact arrangement in the position shown, it can be assumed that the other position changes the contacts (that is, a normally closed switch will open and vice versa). This is not true with three-position selector switches, where an accompanying explanation of each selector position is quite necessary. It can be done in a variety of different ways, but the following two techniques are acceptable and, at the same time, very easy to understand.

One is the use of a box, containing an "X" to represent "closed" and an "O" to represent "open" for each position. The other is a position chart. (For both types, see Figure 1, "Selector Switches.")

Limit switches must have different treatment, even though there are only two basic conditions of action (normally open or normally closed), because the wiring diagram should show the condition of the device with the machine at rest. Under these circumstances, some limit switches may be in the tripped position. Thus, the symbol must indicate a normally open contact held closed, or a normally closed contact held open (as in Figure 1).

Symbols for timer contacts should reflect both the normal condition and the retarding action associated with time out. There are normally open contacts that close at the end of a time period after the coil is energized and there are normally open contacts that close when the timer is energized, then open through a retarding action after the coil has de-energized. These actions must be shown properly on a diagram (see chart). An additional box representation of contact action in the off, reset, timing and timed-out positions is also helpful.

In addition to graphic symbols, there must be standards established for the assignment of letters or numbers to the fundamental functions performed by an electrical-component device.

The designation is governed by the function of the device on a specific machine, not by the type or nature of the device or its possible use for other functions in other equipment.

With these principles, it is possible to work out a complete chart for all commonly used electrical components. Such a chart is a part of the recommended practices or standards used in other industries and the symbols are excerpts or adaptations based on Standards for Industrial Control, NEMA Publication ICI and the American Graphical Symbols for Electrical Diagrams, Y32.2-1954. Some of the more commonly used symbols are shown in Figure 1. All are symbols that are simple to use and easy to understand.

If the packaging industry—manufacturers and users alike—adopted and followed these symbols, they would be doing more than just helping to standardize their own thinking. They would be furthering the goal of a single and universal set of symbols for wiring diagrams for all industrial fields.

The Interconnection Diagram (Figure 2) is a pictorial layout showing the control panel and all its components in their proper physical location. Either individual connecting lines, harnesses or wiring tables must also be provided to show how all components are interconnected to complete the physical circuitry. This drawing makes it possible for the manufacturer's electrician to wire the machine and for the user's electrician to locate devices and trace lines during trouble shooting, maintenance or modifications. In short, this drawing can serve as the guide for a complete wiring road map.

Supporting information

No matter how clear and complete the elementary and interconnection diagrams may be, however, their worth is minimized unless suitable supporting information is presented either on the drawing or on supplemental sheets.

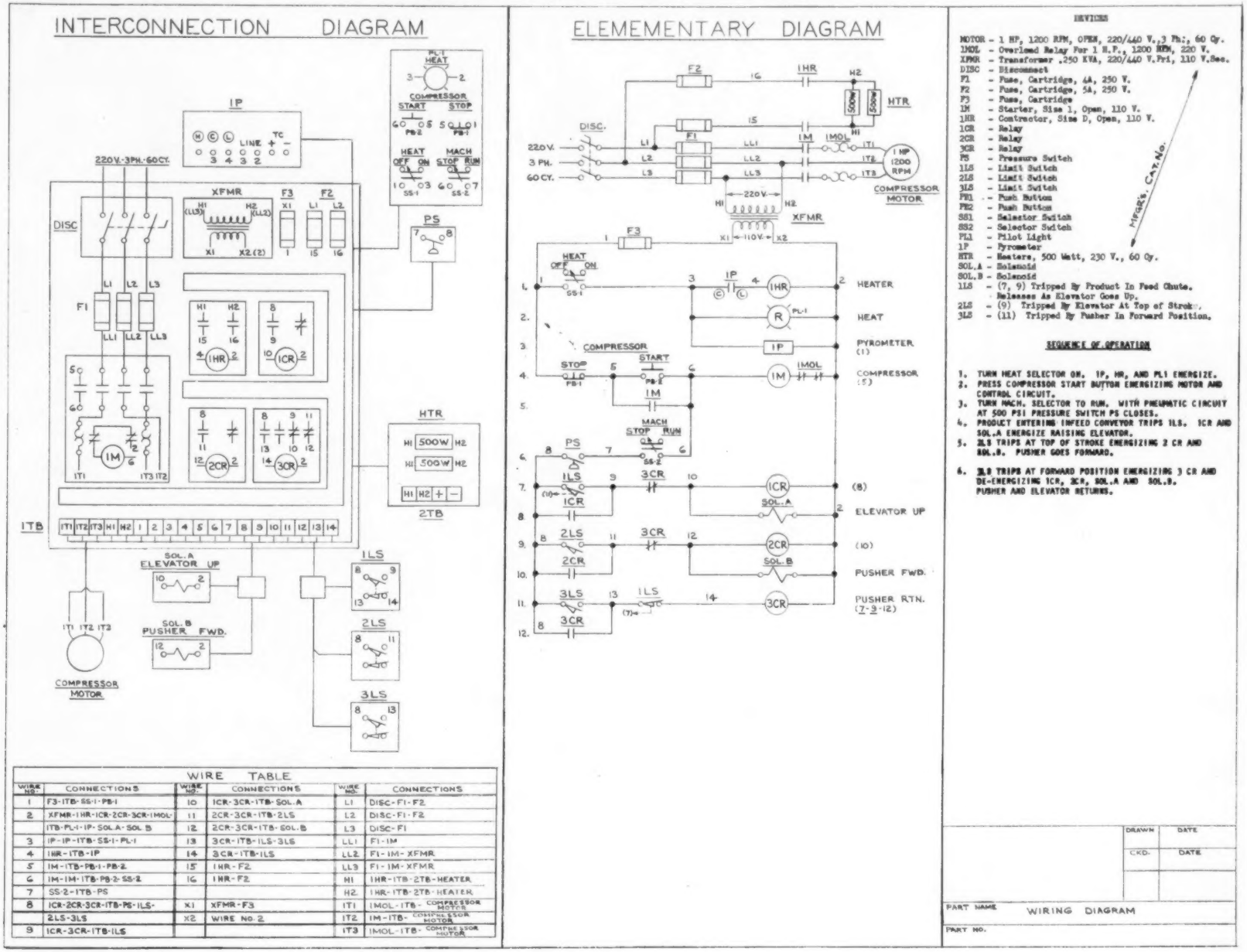
Additional data should include:

1. A material list, which ties together the symbolic designation of the device with its description and catalog number.

2. Limit-switch operation, an invaluable bit of information for the trouble shooter or for the maintenance man, since the exact point at which this device trips may be in doubt.

3. Sequence of operation, to facilitate understanding physical and mechani- [*Continued on page 228*]

Figure 2. Example of a complete wiring plan


INTERCONNECTION DIAGRAM
ELEMEMENTARY DIAGRAM
DEVICES
MOTOR - 1 HP, 1200 RPM, OPEN, 220/440 V.,3 Ph., 60 Cy.
1MOL - Overload Relay For 1 H.P., 1200 RPM, 220 V.
XFMR - Transformer .250 KVA, 220/440 V.Pri, 110 V.Sec.
DISC - Disconnect
F1 - Fuse, Cartridge, 4A, 250 V.
F2 - Fuse, Cartridge, 5A, 250 V.
F3 - Fuse, Cartridge
1M - Starter, Size 1, Open, 110 V.
1HR - Contractor, Size D, Open, 110 V.
1CR - Relay
2CR - Relay
3CR - Relay
PS - Pressure Switch
1LS - Limit Switch
2LS - Limit Switch
3LS - Limit Switch
PB1 - Push Button
PB2 - Push Button
SS1 - Selector Switch
SS2 - Selector Switch
PL1 - Pilot Light
1P - Pyrometer
HTR - Heaters, 500 Watt, 230 V., 60 Cy.
SOL.A - Solenoid
SOL.B - Solenoid
1LS - (7, 9) Tripped By Product In Feed Chute. Releases As Elevator Goes Up.
2LS - (9) Tripped By Elevator At Top of Stroke.
3LS - (11) Tripped By Pusher In Forward Position.
Mfgr's. Cat. No.
SEQUENCE OF OPERATION
1. TURN HEAT SELECTOR ON. 1P, HR, AND PL1 ENERGIZE.
2. PRESS COMPRESSOR START BUTTON ENERGIZING MOTOR AND CONTROL CIRCUIT.
3. TURN MACH. SELECTOR TO RUN. WITH PNEUMATIC CIRCUIT AT 500 PSI PRESSURE SWITCH PS CLOSES.
4. PRODUCT ENTERING INFEED CONVEYOR TRIPS 1LS. 1CR AND SOL.A ENERGIZE RAISING ELEVATOR.
5. 2LS TRIPS AT TOP OF STROKE ENERGIZING 2 CR AND SOL.B. PUSHER GOES FORWARD.
6. 3LS TRIPS AT FORWARD POSITION ENERGIZING 3 CR AND DE-ENERGIZING 1CR, 2CR, SOL.A AND SOL.B. PUSHER AND ELEVATOR RETURNS.
DRAWN
DATE
CKD.
DATE
PART NAME WIRING DIAGRAM
PART NO.

WIRE TABLE

WIRE NO.	CONNECTIONS	WIRE NO.	CONNECTIONS	WIRE NO.	CONNECTIONS
1	F3-ITB-SS-1-PB-1	10	1CR-3CR-ITB-SOL.A	L1	DISC-F1-F2
2	XFMR-1HR-1CR-2CR-3CR-1MOL-	11	2CR-3CR-ITB-2LS	L2	DISC-F1-F2
	ITB-PL-1-1P-SOL.A-SOL.B	12	2CR-3CR-ITB-SOL.B	L3	DISC-F1
3	1P-1P-ITB-SS-1-PL-1	13	3CR-ITB-1LS-3LS	LL1	F1-1M
4	1HR-ITB-1P	14	3CR-ITB-1LS	LL2	F1-1M-XFMR
5	1M-ITB-PB-1-PB-2	15	1HR-F2	LL3	F1-1M-XFMR
6	1M-1M-ITB-PB-2-SS-2	16	1HR-F2	H1	1HR-ITB-2TB-HEATER
7	SS-2-ITB-PS			H2	1HR-ITB-2TB-HEATER
8	1CR-2CR-3CR-ITB-PS-1LS-	X1	XFMR-F3	IT1	1MOL-ITB- COMPRESSOR MOTOR
	2LS-3LS	X2	WIRE NO. 2	IT2	1M-ITB- COMPRESSOR MOTOR
9	1CR-3CR-ITB-1LS			IT3	1MOL-ITB- COMPRESSOR MOTOR

OCTOBER 1961

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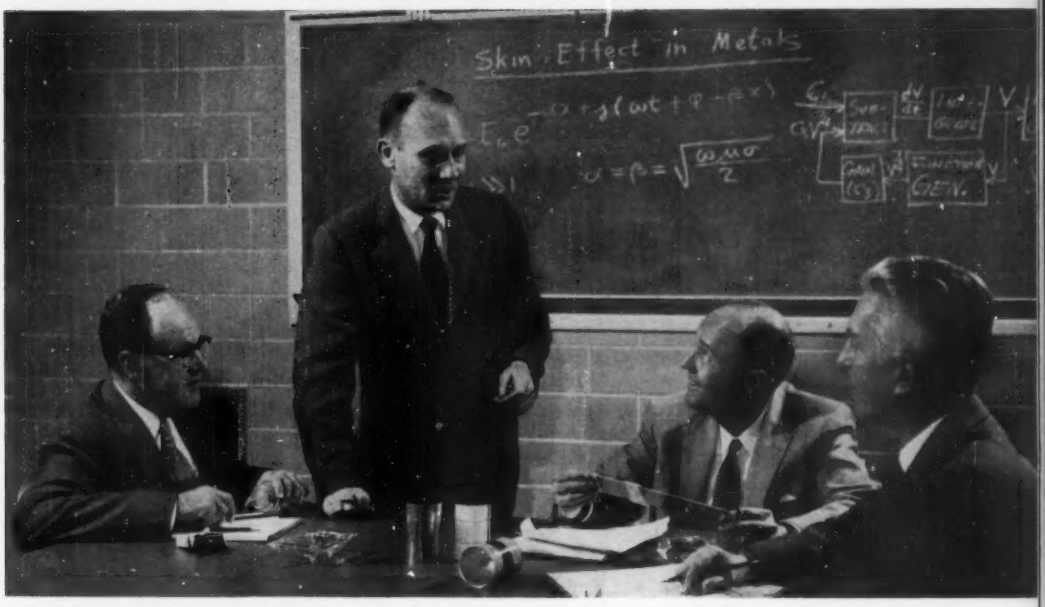


Heads of four departments *at Continental Can's Central Research & Engineering laboratory collaborate on a can problem. Left to right: Dr. F. W. Adams, director of chemistry; Dr. R. M. Brick, director of metallurgy; Dr. H. K. Hughes, director of physics, and L. S. Linderoth, Jr., director of engineering.*

Centralized packaging research

A study of Continental Can Co.'s new closely coordinated facilities, covering metal, paper, glass and plastics, emphasizes the value of interchange in research and development. *By Robert J. Kelsey**

Continued diversification of product lines by packagers has increased the importance of close coordination and direction of packaging research within an organization because:

1. Communication of ideas generated in one line of packaging research may have great value and shorten the length of investigation and development of other new packages or equipment.

2. Scientific personnel—at a premium today—must be capable of quick deployment in areas of research that show the most promise.

3. Expensive modern testing and research equipment must be utilized by the greatest possible number of researchers in order to justify the expenditure for its purchase or development.

*Engineering Editor, MODERN PACKAGING.

While these factors are of most serious concern to packagers with large research facilities, even companies with small research and development departments are faced with much the same problems of getting maximum results from both their scientific personnel and their research equipment.

Thus, many R&D managers can profit from the experiences of Continental Can Co., which has just formally opened the last two units of a four-laboratory research center located in Chicago and vicinity for centralized research and development of a broad line of machinery and equipment, materials and containers for the packaging field.

Because this research center develops machinery and techniques for the use of its customers as well as within the company, a description of its efficient

Compact arrangement *of Continental Can's main research buildings on Chicago's South Side makes possible close contact between researchers from different divisions. Central R&E building is large divided building at left; General Packaging R&D is at right, with the Metal R&D facility at the rear. The Glass R&D is 30 miles away in Plainfield, Ill.*

structure, management and facilities may be of direct help to packagers. Through close coordination of chemists and engineers in both basic and applied research, this center is currently making significant progress in such important packaging developments as the welding, shaping and coating of metal containers, high-speed forming and decorating of plastics packages, creation of new retortable flexible pouches and application of tough, organic coatings to glass bottles to improve their performance.

Organization of research

The main research center is in Chicago's South Side and comprises: (1) the Central Research & Engineering Div., for basic and applied long-term research, (2) the Metal Research & Development Dept., where applied and some longer-range projects for metal cans are researched, and (3) the General Packaging R&D Div., which handles applied developments and some long-range research in plastics bottles, paper and paperboard, flexible and corrugated containers, metal closures, fibre drums, folding cartons, and paperboard cups and tubs. The fourth applied research laboratory, Hazel-Atlas Glass Div. R&D Dept., is located only 30 miles away at Plainfield, Ill., adjacent to Continental Can's newest glass plant, where large supplies of glass can readily be obtained.

The four laboratories, which cost $21,500,000 and in 1961 are operating on an annual budget of $17,000,000, total 561,000 sq. ft. in working area and will have a staff of 1,139 researchers and associated personnel at full strength.

Tight centralization of these research facilities in both geography and management organization is in marked contrast to the decentralized location and structure of the company's operating product divisions. But management believes that the coordination of diverse technical knowledge and multiplication of new ideas is most efficiently performed by a tightly knit research group that has a direct line of communication to both the divisional and the top company management.

For this reason, the general managers of Central R&E and General Packaging R&D are both directly responsible to the company's vice president of research and engineering. General Packaging also maintains close liaison with each of the six divisions it serves. General managers of the metal and glass research laboratories are directly responsible to the divisional managers, but also maintain liaison with the vice president of research and engineering.

The laboratories are further divided, internally, into working groups devoted to equipment, materials and engineering research. In addition, Central R&E has a specialized group working exclusively on synthesis of high-polymer chemicals for long-range use in packaging. In Central R&E, projects are assigned to the group in which the preponderance of work will be done, with experts being drawn from the other groups as they are needed to cover the total technology involved.

To keep divisional, laboratory and top managements acquainted with both current research and the results of completed projects, monthly reports are filed by laboratory managers with top management. Frequent seminars are also held at the laboratories to inform other researchers of new developments in all fields. Abstracts of all completed research projects are circulated to all research groups. Personnel are encouraged to visit other laboratories to pick up ideas. And both projects

and information are funneled into the research laboratories from service departments in each division which directly handle customer problems.

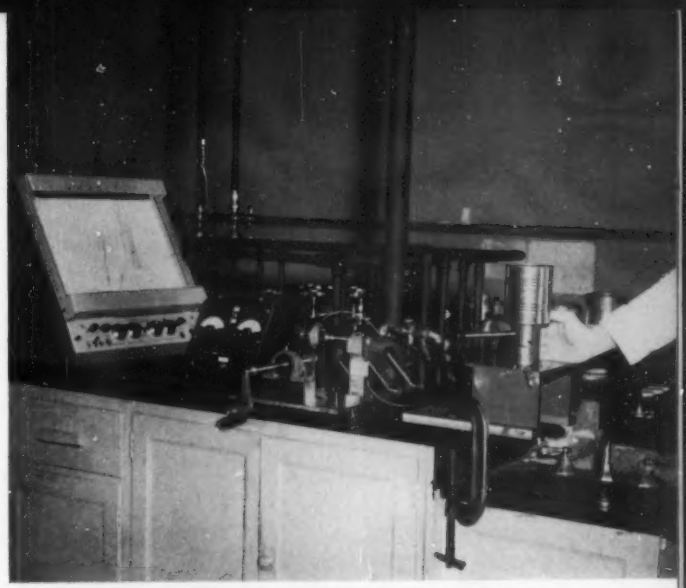
Basic research

The Central R&E laboratory is restricted to long-term basic and applied research projects (three to 10 years), which generally involve development of containers from entirely new materials or radical new methods for manufacturing or testing containers. Wide scope is given to this research division in its choice of projects, but each endeavor must have some practical goal that will eventually benefit one or more products made by Continental Can. Pure scientific research is done only to provide basic information that may be lacking but necessary for a practical project. Exploratory projects may be undertaken on any radically new idea, but before any project is undertaken, the economics of the end result must be established as far as possible.

Basic research on radically new ideas is carried only to the point where the feasibility of an idea is proved from both the technical and economic standpoints. If engineering is involved, the basic parameters of a process are established and a mock-up of possible machinery is constructed. The project is then passed along to the divisional applied-research laboratory involved, where final engineering or product design is formulated for the product division.

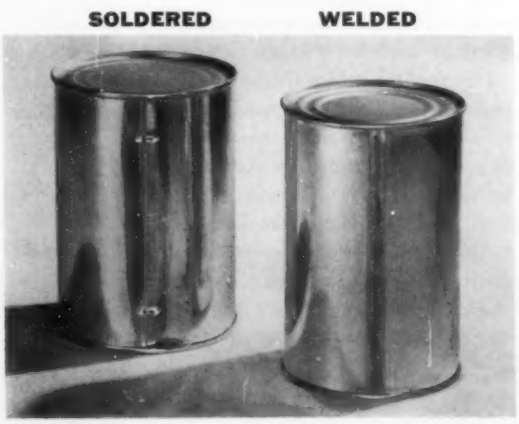
As an example, such a project is now under way at Central R&E for the development of continuous welding of side seams on can bodies—a complex, long-term project that has involved a great deal of physics, mechanics, electronics and metallurgical research, and very close cooperation with Metal R&D. It will eventually be combined with two other research projects—high-speed printing and lacquer coating—to enable continuous manufacture of can bodies from roll-stock tinplate at speeds of more than 600 ft. per minute. The method already appears feasible from the standpoint of speed; cost remains to be worked out. Also involved in this project are studies of tinplates harder and thinner than any now in commercial use, which must be adapted to welding and flanging by the new process.

Many research projects necessitate a broad selection of researchers with such diverse specialties as engineering, chemistry, physics, metallurgy and polymer research, as in a current long-range inves-

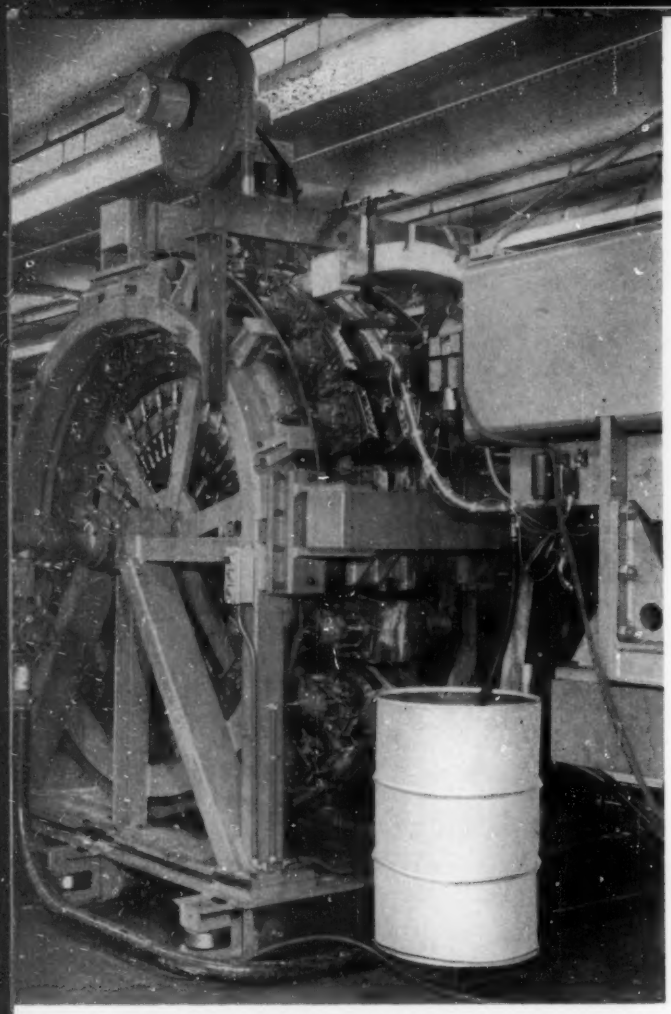


Lightweighting research *for cans is now directed toward lids and utilizes such special equipment as this hydraulic tester that measures and records changes in both the pressure and volume inside a can as the lid bulges. Graphic representation, at the left, is then used to plot improved can-lid designs.*

Supersensitive leak detector *for metal cans operates on a mass spectrometric principle, spots penetration of helium gas into can. It is capable of pinpointing a leak so small that it would take hundreds of years to pass 1 cc. of air.*



Experimental welding process *for metal cans provides a flush side seam (can at far right) of great strength. Technique may eventually be both faster and more economical than the conventional soldering method, shown on can at left.*



High-speed blow-molding machine, *still experimental, may radically increase production and lower the cost of polyethylene bottles. An example of inter-laboratory cooperation, this machine was built by Metal R&D for the General Packaging group and is reportedly capable of more than 150 bottles per minute. Extruder (right) feeds parisons into 25 molds mounted on huge rotary wheel (left). Additional equipment automatically cools, trims and reams containers.*

tigation of new metals for coating steel, such as aluminum, zirconium and titanium, even though the latter two are not currently available at economical prices. Such metals are being applied by unique vapor-vacuum methods, since almost twice as many metals can be applied to steel by this technique as by any other known coating process.

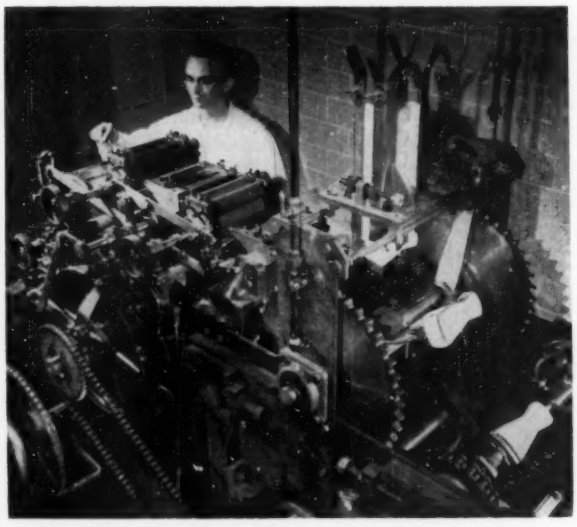
To speed the manufacture of plastic bottles, basic research is being conducted also into other new techniques of forming, such as combined injection-blow molding. And to perfect the quality of glass bottles and jars, revolutionary infra-red and "light-pipe" testing methods are being devised that will enable extremely hot glass containers to be checked before they enter the annealing lehr.

Central R&E is also the location of such expensive research instruments as an electron microscope, vapor analyzer, special infra-red and electronic measuring devices, and a collection of power-generating and measuring instruments regarded as one of the finest in the country. These tools are used most frequently in basic research and are far too costly for any single division to maintain and staff. However, they are available to all divisional laboratories, which can send personnel to learn the operation and then utilize the equipment to shorten research time. Among these machines is a new Podbielniak analyzer which automatically volatilizes, measures and records the individual constituents of mixed organic compounds in a fraction of the time needed for other techniques.

Applied research on metals

At the divisional laboratories, basic ideas are translated into machines, working techniques and containers. But, unlike Central R&E, the divisional groups may work on both short- (one year) and long-term (up to five years) projects. However, research on any long-term project must be from a different aspect, or toward a goal different from any similar work done in the basic research laboratory, to avoid duplication of effort.

At Metal R&D, very active research of both long-term and short-term nature is being done on lightweight tinplates, particularly the development of new lightweight ends for the thin can bodies which



Faster lithographic printing *for rectangular plastic bottles has been achieved with this experimental unit, designed by General Packaging R&D, which completes a design in four colors with only one pass. Both sides of the container can be printed by the addition of another printing unit.*

are already in commercial use by several packagers.

Such containers require basic study of end designs which will provide necessary strength and of new specifications for body and end hooks which are rolled to form the double seam of the can.

For such work, special test equipment must be bought or developed by the divisional laboratory. One such device, adapted recently by an instrument supplier from an electronic tube tester, is a spectrometric detector for can leaks. By clamping the can on a vacuum coupling and applying a fine stream of helium from a hand nozzle to various external parts of the container, then inspecting the internal gasses by spectrometric analysis, leaks can be detected that are so small they would take 660 years to pass one cubic centimeter of air.

Strengths of lightweight bodies and ends for cans are also checked on special apparatus designed and built by Continental Can. Such a unit for testing can ends employs hydraulic pressure to inflate the can, with deformation of the ends measured as a function of pressure and volume on a recording chart. A simple test device for checking the damage to can bodies caused by impact from the chimes of other cans during shipping utilizes a guillotine equipped with a chime-shaped tool that is dropped on the body from varying heights to determine the point of fracture of a can.

This divisional laboratory is also particularly skilled in mechanical engineering. Thus, its personnel and facilities are frequently "borrowed" by other laboratories for such special engineering projects as the recent construction of a high-speed rotary blow-molding machine for plastics bottles and accompanying automatic trimming and reaming units. Built by Metal R&D for the General Packaging Laboratory, this "interim" machine is capable of turning out bottles well in excess of 100 per minute and may bridge the gap between present blowing techniques and the even faster injection blow-molding method, which is still under development.

Metal R&D also has groups that are expert in development of new protective and decorative coatings, can enamels and inks, and is working on new methods of soldering and can seaming, and on equipment for applying these techniques.

Plastics and paper research

In General Packaging R&D, which started operation on a consolidated basis this past January, cross-fertilization of ideas is even more likely to occur, since the research activities of six operating divisions are now carried out under one roof. This unique centralization was undertaken because all of these divisions use papers, plastics, protective and decorative coatings, [*Continued on page 221*]

No-drip coatings *for the finishes of glass bottles are the objective of a major development project at Glass R&D.*

External coatings *for glass bottles are gauged for coefficient of friction on a company-built tester designed by Glass R&D. A tilting platform measures the final angle of slip.*

Questions & Answers

This consultation service on both technical and engineering subjects is available at your command. Simply address your questions to the Technical Department, Modern Packaging, 770 Lexington Ave., New York 21. Your name or other identification will not appear with any published answer.

Ultraviolet treatment of film

Q: *We want to lengthen the shelf life of our line of packaged cakes. The line includes all types of cakes and we have tried several different package constructions. We find that some cakes dry out rapidly and so need moisture protection. However, if we make a really moistureproof package, then some cakes show mold growth. We have decided that the best package would be a sealed polyethylene bag or wrapper which is then given a brief exposure to a strong ultraviolet ray. In this way we would get a long shelf life by preventing loss of moisture and also, there would be no mold growth.*

Our question is: Will the polyethylene film be affected by the ultraviolet treatment?

A: Polyethylene film will not be severely degraded by a short ultraviolet treatment. Extended exposure to ultraviolet will degrade polyethylene and almost every other packaging material. However, the real problem is not the degradation of the film, but the process that you propose—that is, the use of ultraviolet exposure to prevent mold growth in bakery products. This will not accomplish the results you desire to obtain.

Complex food products such as cakes and other baked goods must be taken out of the oven, go through further processing and then through a wrapping operation. It will not be possible to perform all of these operations in a sterile or mold-spore-free atmosphere, nor can you even be sure that the packaging film is sterile before or during the wrapping operation. As a result, we must assume that the interior of the package and the surface of the product is well contaminated with mold spores which will grow, given sufficient time in the proper environment. The proper environment in this case could be achieved by wrapping the product in a highly moistureproof film such as polyethylene.

It will not be possible for you to give a commercially handled and wrapped bakery product sufficient treatment by ultraviolet to kill all mold spores even though such treatment would have no adverse affect on the film itself.

We suggest that you discuss this problem with technical people in the food field and perhaps try a few experiments to prove these facts before attempting any commercial shipment of your products.

Special deal-pack machines

Q: *Constant changes in both the grouping of products and the pricing of goods make it necessary for us to find a low-cost machine for the skin packaging of different product combinations that can be moved to various packaging lines in our plant. Also, we need an economical method for adding special price-reduction banners to cartons, since we cannot afford the short printing runs necessary for changes in these containers. Can you advise us on equipment available for this purpose?*

A: Size of skin-packaging machinery depends largely on the area of the platen and the degree of mechanization in the unit. Thus, if you will be satisfied with a small area (which might handle only four cards) and semi-automatic machine operation, there is equipment on the market that is both inexpensive and highly versatile.

One of the most interesting is a new machine, designed for household movers, that is wired for 110 volts and is mounted on casters for portability. It has a platen area of only 252 sq. in. and must be hand fed, but it can be moved anywhere. This machine might provide a solution to your problem.

The addition of price-off banners to cartons can be done in either of two ways: (1) by transfer printing and (2) by labeling.

A method for changing carton copy by hot-transfer printing is almost ready for commercial use and employs a release-coated web on which actual printing inks are laid down in reverse order. When heated and pressed against a container, the ink transfers from web to package. Machinery for this process is built and the technique—at least for small printed areas—is economical.

Pressure-sensitive labels can also be used for adding information and there is a vast variety of equipment to handle these "stickers." With either process, the machine jig or registration mechanism must be accurate enough to apply the banner uniformly on each container.

Ultrasonic sealing equipment

Q: *We read with interest your recent article on ultrasonic sealing and believe we have a packaging problem that could be solved with this technique. Where can we buy a packaging machine using this principle?*

A: As we took care to point out in that article ("Ultrasonics: When?" Modern Packaging, July, 1961, p. 100), there is no standard packaging machine currently available that employs ultrasonic sealing, although one or two special units have been especially created for particular packaging applications.

Most of the manufacturers of ultrasonic components are hopeful that established packaging-machinery manufacturers will utilize these vibratory sealing heads in existing machine bodies. However, standard machines are mechanically constituted to handle only bar-type sealing techniques, which are just being developed for ultrasonic equipment.

Machines might be built for linear sealing or "stitching" via ultrasonics, but this method of sealing—despite its speed per linear foot—limits the number of packages that can be produced per minute. Your best bet, at present, is to work directly with the producers of ultrasonic components to design a special machine to solve your specific packaging problem.

Bemis nationwide packaging service

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Increase your bakery profits with Bemis Poly Packaging

Bakers across the nation are using Bemis polyethylene packages for bread, buns, pie shells, tart shells, pie crust mix, and assorted rolls. You, too, can achieve greater profits and maximum consumer appeal with Bemis poly packaging.

Low-cost poly with the "feel of freshness" replaces older-style packaging materials. Product visibility, ruggedness, and flexibility make Bemis poly packages ideal for fresh and frozen bakery products.

Bemis nationwide specialists provide a complete packaging service. They can recommend and supply standard or special poly bags and printed roll stock, and high-quality printed designs that *sell* your bakery goods "off the shelf."

Call your Bemis man. Bakery problems become profitable opportunities—with poly.

Bemis *where packaging ideas are born*

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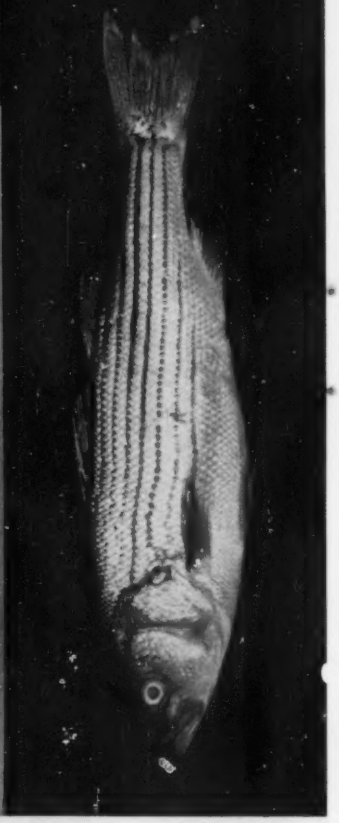
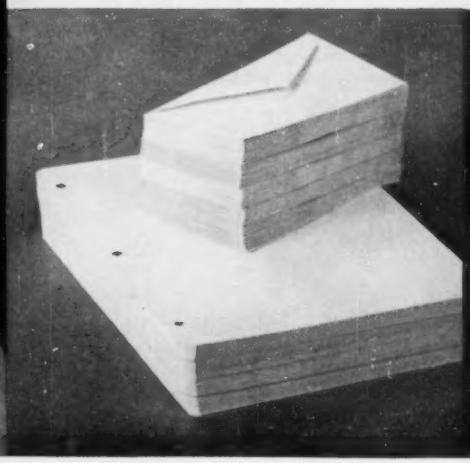
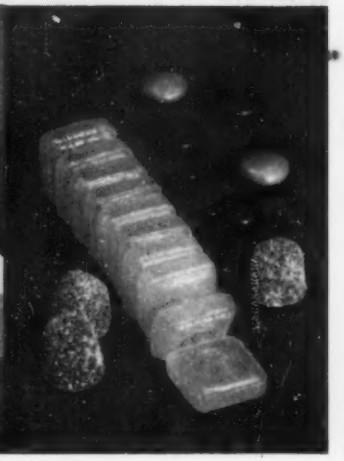
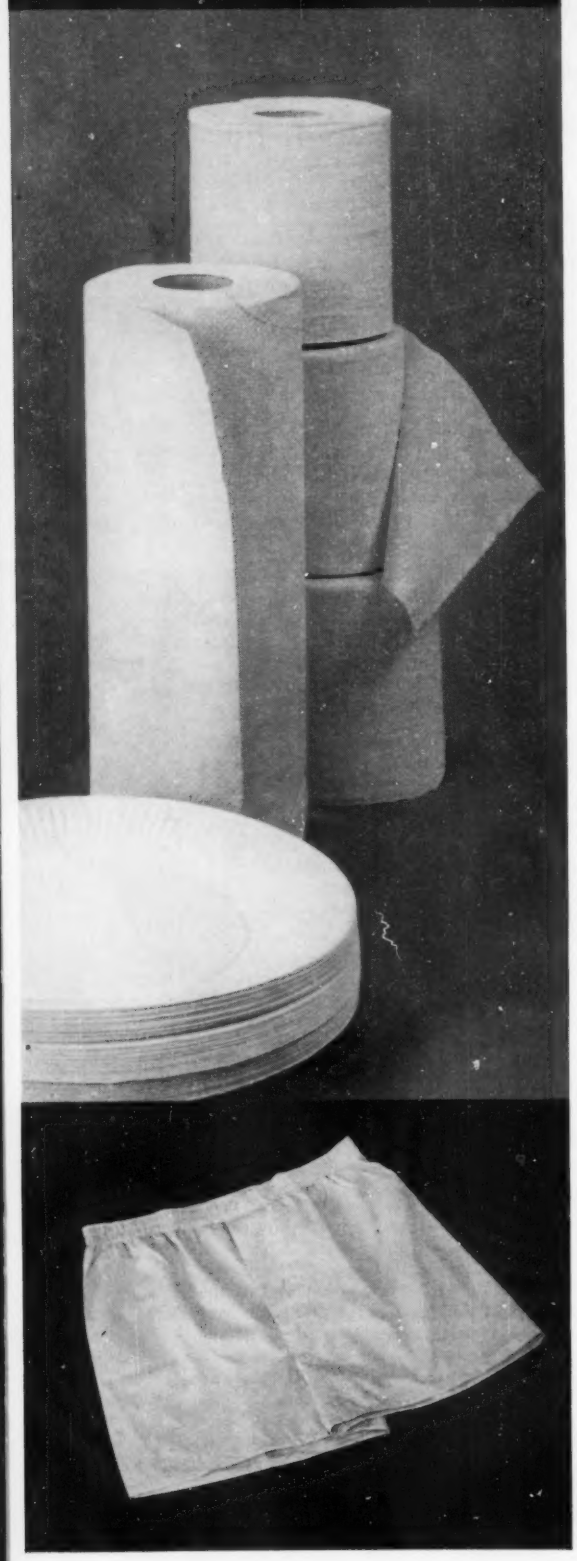






... hard or soft ... all these products are now automatically overwrapped in polyethylene



Paper napkins, towels and plates, stationery, loose leaf fillers, bread, soft goods, and now . . . cereals, candy, facial tissues—even boxes of frozen fish! Yes, all these products are commercially overwrapped in polyethylene film today. With modern, readily available, high-speed automatic machinery, you can use polyethylene to wrap products of all sizes and shapes.

For you, this means new opportunities for more sales, more profits. Sparkling clear, soft-to-touch film of BAKELITE polyethylene increases eye and buy appeal. It is tough, highly moisture resistant, and has excellent shelf life. Gives your product top protection in storage, shipment and on store counters. And, polyethylene film costs you less than any other transparent film.

For details, contact your packaging supplier. Or write us for literature on polyethylene overwrapping and a list of leading makers of automatic polyethylene overwrap machinery. Dept. KH-86J, Union Carbide Plastics Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. *In Canada:* Union Carbide Canada Limited, Toronto 12.

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plants & people

New Jersey Machine Corp., Hoboken, has purchased the **High Production Machine Corp.** from its parent company, **Ex-Cell-O Corp.**, Detroit. The newly acquired company, which manufactures set-up-box wrapping and gluing machinery, is expected to further New Jersey Machine's penetration into the set-up-box industry. Transfer of the property to the Hoboken plant is expected to be completed by the end of the year. New Jersey Machine has acted as sales agent for High Production Machine for many years.

Packaging Frontiers, Inc., sub. **Bemis Bro. Bag Co.**, St. Louis, has moved into its new headquarters building in Waltham, Mass. **Paul L. Wheeler**, Packaging Frontiers pres., reports that firm is soon to begin full-scale operations. The company was organized by Bemis last January to manufacture and market Ultra-Pak machines, which form, fill and seal tetrahedral flexible containers for liquid and viscous products (see "Tetrahedral Container and Machine," MODERN PACKAGING, April, 1961, p. 76). Included in the new headquarters building are general and sales offices, a customer technical-service laboratory and a research and development laboratory.

Wheeler

Minnesota Mining & Mfg. Co., St. Paul, has appointed **Dr. Charles W. Walton** as v.p. for research. He succeeds **Dr. Carl Barnes**, who has resigned. Dr. Walton will be directly responsible for the Central Research Laboratory and the Products Fabrication Laboratory. Central Research is charged with applying research knowledge to long range projects not related to present 3M product lines and with increasing basic technology without regard to immediate commercial objectives. Products Fabrication conducts research in the areas of process and product development, determining techniques in its pilot plant that can be duplicated on full-scale production lines.

Walter B. Bruce has been appointed mgr. of sales prom. and advtg. for **American Can Co.**'s Canco Div., New York. He fills the position vacated by **J. Whitney King**, who was recently promoted to gen. mgr. of the newly created Custom Packers Div. Before joining American Can in 1957, Mr. Bruce had served as advtg. and sales-prom. mgr. for the Grand Union Co. and H. C. Bohack Co., supermarket chains.

Spencer Chemical Co., Kansas City, has acquired two companies which will be operated as wholly owned subs. **Wrapture, Inc.**, Flushing, N. Y., is the third flexible-packaging firm acquired by Spencer this year. **Samuel Rivman** will continue to manage Wrapture. Acquisition of **Perkins Glue Co.**, Lansdale, Pa., marks Spencer's entry into the adhesives field. The firm will continue to be under the direction of **James** and **Julius Stryker** (board chairman and pres. respectively).

William H. Enzie has been appointed to the newly created position of mgr., packaging development and procurement services for **General Foods Corp.**, White Plains, N. Y. The organizational change merges the corporate packaging development dept., headed by Mr. Enzie for the past two years, with the corporate purchasing department function of packaging procurement and related activities. In his new post, Mr. Enzie assumes responsibility for the procurement of packaging materials, premiums and merchandising and promotion pieces as well as for packaging development and design.

Enzie

Gen. Lucius D. Clay, board chairman, **Continental Can Co.**, New York, has been appointed President Kennedy's personal representative to Berlin. He will continue as board chairman on uncompensated leave of absence for the duration of his Berlin assignment. **Thomas C. Fogarty**, pres., succeeds Gen. Clay as chief exec. officer of the company. Mr. Fogarty joined Continental in 1929, became a v.p. in 1946, a director in 1951 and was elected pres. of the company in 1956.

Robert G. Fairburn, member of the board of directors of **Keyes Fibre Co.**, Waterville, Me., has been elected to succeed **Dwight S. Brigham** as board chairman. Mr. Brigham is remaining as a director and member of the exec. committee. Mr. Fairburn succeeded his father as pres. of the **Diamond Match Co.** in 1947 and later moved up to board chairman when that firm became **Diamond National Corp.** in Sept., 1959. He became a director of Keyes Fibre early in 1961.

Cvacho

Daniel S. Cvacho has been promoted to the newly created position of director of package engineering for **Reynolds Metals Co.**, Richmond, Va. In his new capacity, Mr. Cvacho will be responsible for the design and installation of packaging machinery and equipment used by Reynolds or its packaging customers. He has been with Reynolds since 1944. His most recent post was that of division engineer for foil printing.

A new company—**Champlain-Zapata Plastics Machinery, Inc.**—has been formed to market a new automatic process for molding expandable polystyrene beads. Permanent offices and manufacturing facilities are located in Caldwell, N. J. **Robert H. Gow** is pres. of the firm. **Harry Eisenberg** is mktg. director. **Frank Lambert** is research director.

Thatcher Glass Mfg. Co., New York has completed the move of its plastic-tube manufacturing plant from Nashua N. H. to Muscatine, Iowa. The move is the culmination of a $1,200,000 expansion program designed to triple the firm's production of vinyl, polyethylene and polypropylene squeeze tubes.

Thatcher has also licensed **Peerless Tube Co.**, Bloomfield, N. J., to manufacture plastic tubes. Peerless, a producer of collapsible metal tubes, reports that it is constructing a new plant in Bloomfield to facilitate its production of plastic tubes.

A new mktg. dept. has been established by **Lord Baltimore Press**, New York. **O. Robert Gibbons** has been appointed director of mktg. for the new dept., which will direct market research, materials development, graphic and structural design and packaging services.

The Pantasote Co., New York, and the **Sherman Paper Products Corp.**, div. **St. Regis Paper Co.**, New York, have joined forces to effect complete national distribution of Panta-Pak molded polyvinyl chloride plastic packaging containers. Pantasote will manufacture the lightweight, multi-cavity tray containers and Sherman will market them. The present Panta-Pak sales staff will be integrated into Sherman's sales force. **Philip J. Sapienza**, Panta-Pak sales mgr., has become mgr. of Sherman's Plastics Div. and will coordinate Panta-Pak sales through regional offices located in various cities throughout the country.

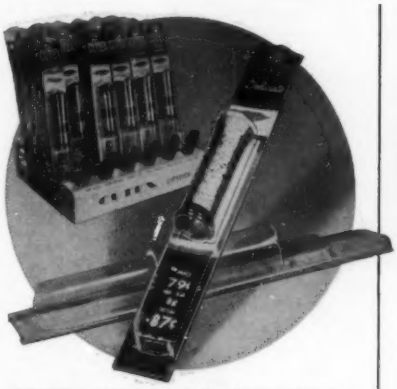
Sapienza

The plastic-producing capacity of **Enjay Chemical Co.**'s polyolefin plant in Baytown, Tex., is being expanded by nearly 50% from an initial rated capacity of 40 million pounds per year. This expansion is expected to be completed by the end of the year. Enjay, which markets Escon polypropylene produced at the Baytown works, has also approved a second expansion which will reportedly double the plant's production by the second half of 1962. The company is a div. of **Humble Oil & Refining Co.**, New York.

William F. Mears has been named to the post of parts-packaging engineer for the service section, **General Motors**

six success packages

VICKS Inhaler packed in a **SNAPLAX** — Plaxall's double undercut blister "snaps" into a diecut display backing so as to eliminate sealing.



CUTEX lipsticks by Northam Warren are vividly displayed in these beautifully contoured transparent SLIDEPLAX packages.

ISODINE bottle encased in one piece fold-over blister — this stand-up, see-through package "sells" from both sides.

LEHN & FINK packs six Noreen hair rinses in this acetate SLIDEPLAX — slide-out card permits individual dispensing.

BECTON, DICKINSON thermometer and case are held firmly in snap-fit precision formed blisters for maximum protection.

BRIDGEPORT METAL flashlight and battery combinations are readily accessible for inspection or testing in sturdy SLIDEPLAX packages.

All pressure-formed in plastic by Plaxall

Plaxall, with nearly a quarter century of pressure-forming experience, now combines "in plant" sheet extrusion with high speed thermoforming to offer an unlimited range of formed plastic packaging at lowest cost. Experience counts in plastics...when you need thermoformed packaging, be sure to consult Plaxall, the Pioneer in pressure-forming!

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Plants & People [*Cont'd*]

Corp., Detroit. Mr. Mears joined GM in 1940. From 1957 to 1959 he was employed at **Douglas Aircraft Co.'s** Charlotte, N. C., missile plant as head of packaging and crating. He rejoined GM in 1959 as parts administrator and later supervisor in the Allison Div. Mr. Mears will be headquartered in Detroit.

Ekco-Alcoa Containers Inc., Wheeling, Ill., has acquired the **Alcoa-United Unit Container Co.**—a joint venture of **Aluminum Co. of America** and **United Shoe Machinery Corp.** Alcoa-United manufactures an integrated, automatic unit for forming, filling and hermetically sealing rigid unit containers for individual portions of jams, jellies, mustard, ketchup, salad dressings and other condiments.

Schuum *Tooker*

Ekco-Alcoa also reports the establishment of a new division to develop products and markets for single portion aluminum foil containers. Called the Unit Container Div., it will be headed by **Louis Schuum** as gen. mgr. In addition to his new duties, Mr. Schuum will retain his post as the company's v.p. for manufacturing—a position he has held since the founding of Ekco-Alcoa in 1955. The new division has its own research and marketing organizations and its sales mgr. is **Robert H. Tooker.** Mr. Tooker previously had served for two years as Ekco-Alcoa's mgr. of market development, where he was responsible for planning and directing new product introductions.

Hansen

Harold M. Hansen has been named gen. sales mgr. of the **Bradley-Sun Div. of American Can Co.**, New York. The div. also has moved its main office to U.S. Highway 22, Union, N.J. Mr. Hansen joined **Bradley Container Corp.** prior to its acquisition (along with the **Sun Tube Corp.**) by American Can. In 1958 the two companies were discontinued as subs. and now operate as the company's Bradley-Sun Div.

Harry L. Farmer has been named to the newly created position of product supervisor, produce packaging, in the Plastics Div. of **Reynolds Metals Co.**, Richmond, Va. The company states that the new post was necessitated by the increased use of Reynolon—an oriented polyvinyl chloride film—for packaging fruits and vegetables. Mr. Farmer joined Reynolds in 1956.

Emhart Mfg. Co., Hartford, has created the new position of mgr. of products and market planning and has appointed **James H. Taylor** to fill it. Mr. Taylor previously was asst. to the v.p. of **Standard Packaging Corp.**, New York.

Container Corp. of America, Chicago, has appointed **John V. Massey** as mgr. for advtg. and design. Mr. Massey joined the firm in 1957 as mgr. of graphic design.

Container Corp. has also named **James F. Tate** as mdsg. asst. to **Harry E. Miles**, v.p. Mr. Tate was formerly gen. sales mgr. for the Corrugated Div. of **The Mengel Co.**, Louisville, a Container Corp. sub.

Two asst. technical directors have been appointed by **Allied Chemical Corp's General Chemical Div.**, New York. They are **Charles B. Miller** and **Dr. Curtis B. Hayworth.** Both are headquartered at the General Chemical Research Laboratory in Morris Township, N. J. Mr. Miller has responsibility for laboratory research and special laboratory projects. Dr. Hayworth has responsibility for development research and planning research.

Frank J. Marchese, formerly sales mgr., has been named director of mktg. and sales of the Packaging Div. of the **Warner Bros. Co.**, Bridgeport, Conn. According to the company its recent acquisition of **Plastic Artisans, Inc.** created the need for this new position of over-all responsibility for paperboard, plastic and combination packaging sales. Plastic Artisans, operating as a fully integrated part of Warner's Packaging Div., will maintain its present manufacturing and sales organization at Port Chester, N.Y. **R. B. Van Houten** continues as sales mgr. for plastic packaging.

Carl E. Anderson has been elected pres. of **E. W. Bliss Co.**, Canton, O. **Robert Potter**, board chairman, had been acting pres. The firm manufacturers packaging machinery.

Donald C. Storch has been named corporate mgr. of purchases of **American Can Co.**, New York. Mr. Storch has been with the company since 1949 and has held various purchasing positions.

Rexall Chemical Co., Div. Rexall Drug & Chemical Co., Los Angeles, has named **John H. Myers** to the post of supervisor, sales service laboratory at Paramus, N. J. Mr. Myers will supervise the laboratory work required to back up Rexall's customer technical-service program and will evaluate resin-processing techniques developed by the company. He will also coordinate quality-control.

Six managerial and supervisory appointments have been made in plastics sales, Polymers Dept. of **Hercules Powder Co.**, Wilmington, Del. They are: **Emmett E. Hixon**, to mgr., plastics sales; **Robert C. Clark**, to product mgr., Hi-fax high-density polyethylene; **Robert D. Ullrich**, to product mgr., Pro-fax polypropylene; **George M. Taylor**, to product supervisor, Penton chlorinated polyether; **William O. Bracken**, to supervisor, market development, and **Russell D. Hanna**, to supervisor, technical service.

The polymers dept. also has named five new district mgrs. for plastics sales. They are: **Charles A. Borton**, Cleveland; **John L. McKeen**, Chicago; **Paul J. Metzger**, West Coast; **Daniel G. Welsh**, Cincinnati, and **Robert R. Stover**, New York.

Fred P. Leswing has been appointed mgr. of sales in the Eastern region for **Continental Can Co.'s** Bondware Div. Mr. Leswing, who had been district sales mgr. in Cleveland, will have direct responsibility for general-line sales of paper cups, plates and tubs.

Packaging Corp. of America, Evanston, Ill., has acquired the **Expandable Plastics Co.**, Akron, as part of its expansion into the field of foam-plastic packaging. It is the fourth such acquisition by the firm since last December.

John V. Ryden has been appointed packaging development coordinator for the **Vick Mfg. Div.** of **Richardson-Merrell, Inc.**, New York. Mr. Ryden will serve both the Vick Chemical Co. Div., which markets proprietary products, and the manufacturing div., which produces them.

West Virginia Pulp & Paper Co., New York, has formed a paraffin-carton dept. within its Bleached Board Div. The new manufacturing and sales organization will direct its efforts toward expanding its markets in the dairy, meat-products, margarine and frozen-food areas. **John L. Bandelin** has been appointed sales mgr. of the new department, **J. Dudley Gardner** will direct financial and administrative functions and **Nelson E. Zinn** will head production activities. **John E. Morgan** has established a Southern sales office in Atlanta. **James A. Smith** becomes mgr. of national accounts and will also have responsibility for the metropolitan New York area. **John Weiss**, with headquarters in Philadelphia, is sales mgr for Pennsylvania, Delaware and Maryland.

Bandelin *Smith*

Permacel, New Brunswick, N. J. manufacturer of pressure-sensitive tapes and adhesives, has announced the appointment of **Robert B. Cook** as product mgr., specialty paper products.

Henolite Products, Inc., a newly formed molder of foam polystyrene products has begun operations at its facility in Phoenixville, Pa. **Henry C. Lavely**, pres., says the new firm is equipped to produce a wide variety of products from Koppers Co.'s Dylite expandable polystyrene.

Celanese Plastics Co., div. Celanese Corp. of America, New York, is expanding its production of blow-molded plastic containers in the Midwest and on the East Coast. A new plant is nearing completion in Batavia, Ill. Operations will shortly be transferred there from present facilities in Logan Square, Chicago. A plant building also has been purchased in New Castle, Del., which

[*Continued on page 162*]

WE MAKE PLASTIC CLOSURES FOR LESS

It's a dramatic story that has our competitors asking how . . . our customers asking for more

PAPI

Need custom molded or stock size Thermosetting and Thermoplastic closures? You'll be pleased to know that Plastic Assembled Products, Inc. is sensibly pricing these items with no cuts to quality or service. A call to PAPI will tell you just how much time and money your firm can save. Deal with the manufacturer who knows your production problems and can assure prompt delivery on any size order. Start greater profits coming your way — write or call PAPI today.

Another PAPI exclusive—Sprinkler caps in 3 colors and shaker caps in 2 colors—Over 100 color combinations.

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dropper assemblies • plastic closures • plastic bottles • custom molding • applicators

Announcing the new embossed paper

KLINGKRAFT!

Won't skid!

Won't slip!

Won't slide!

West Virginia Klingkraft(TM)! This new embossed paper delivers outstanding skid resistance when used as outer ply of multiwalls, or in baler bags . . . *and the photograph proves it!* Klingkraft embossing also improves appearance, boosts scuff resistance, too. Ideal for grocery bags, magazine wraps—a host of other converting applications—new Klingkraft is available in all grades of kraft, including Clupak* extensible paper, in basis weights of 40 to 120 pounds. Best of all, new Klingkraft *costs no more* than regular grades! For informative booklet and samples, write Kraft Division Sales, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

West Virginia Pulp and Paper

**Clupak, Inc.'s trademark for extensible paper manufactured under its authority and satisfying its specifications.*

REXALL

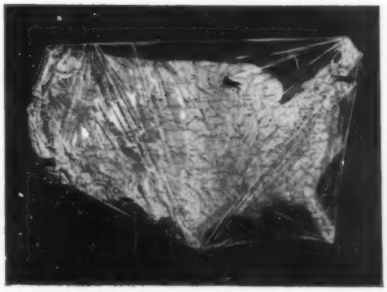
High-Impact Strength FILM Helps Sell Produce!

■ **Tough** and **flexible** with **high-moisture barrier** — that's REXALL's new polyethylene packaging film. It sparkles with other all-important advantages too — like unusual surface gloss and shimmering clarity. REXALL high-impact-resistant film **protects produce, keeps the freshness in — adds high-impact to sales appeal, too.** And REXALL film has the **uniformity** needed for automatic bagging and packaging.

AVAILABLE ON A LOCAL LEVEL, COAST TO COAST!

REXALL film is created in three strategic areas — California, Wisconsin and Rhode Island — to give you "local" delivery of high-quality polyethylene film in the low, medium or high density range.

Write, wire or call now for complete information



Film Division

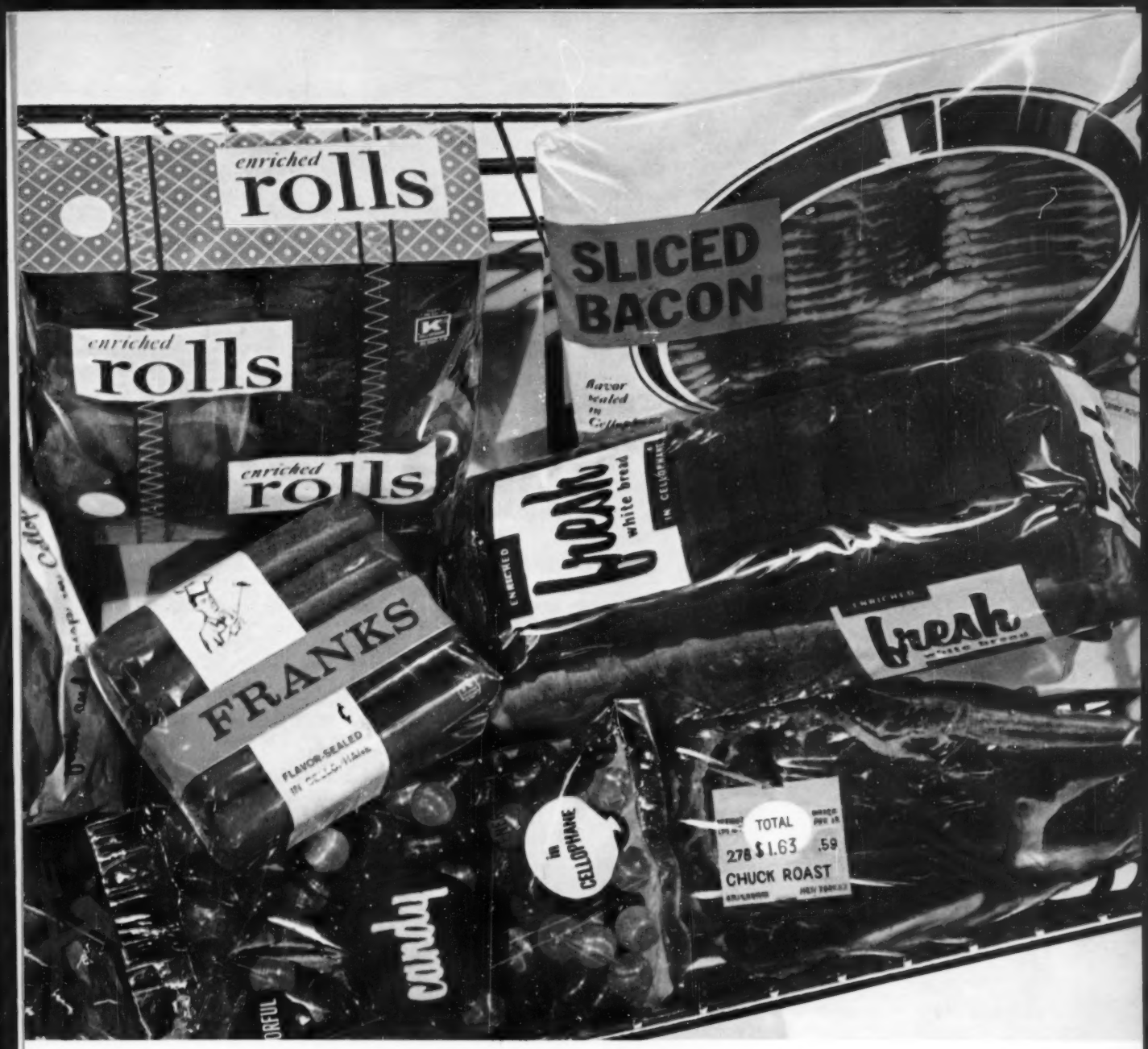
REXALL DRUG & CHEMICAL COMPANY

P. O. Box 37—Paramus, New Jersey • COlfax 2-6500

Du Pont makes over 100 different

Today, packagers can choose from over 100 Du Pont cellophanes to meet new, ever-changing needs. Each of these films has been developed to meet specific requirements of specific products. Each offers the sales appeal of sparkling transparency. Each prints beautifully. Each runs efficiently on high-speed machinery.

Yet there are important differences. Some are moistureproof. Others are not. Some are polymer-coated—extra-strong, extra-protective. Some heat-seal at lower temperatures. Some give higher



cellophanes to provide the right one for you!

yields. Some are best for bags, others for overwraps. And still others are ideal for extrusion coating and laminating.

The point is: Du Pont cellophane is versatile. Different coatings make it many, many different films. And more are on the way.

Have you checked lately? See how you can get better, faster-selling, more profitable packaging. Ask your Du Pont Representative or Authorized Converter which Du Pont cellophane is the right *one* for you. Du Pont Co., Film Dept., Wilmington 98, Delaware.

DU PONT
REG. U. S. PAT. OFF.
Better Things for Better Living . . . through Chemistry

DU PONT cellophane

Plants & People

[*Continued from page 156*]

is expected to take over the operations of the present Trenton facility by the end of the year.

James A. Houle has been appointed commercial development mgr. of **Tee-Pak, Inc.**, Chicago manufacturer of cellulose casings for meats. Formerly mgr. of market development for **American Viscose Corp.**, Philadelphia, Mr. Houle also has done marketing for **Minnesota Mining & Mfg. Co.**, St. Paul.

Richard W. Lindquist has been transferred to the **Hazel-Atlas Glass Div.** of **Continental Can Co.**, New York. He will fill the post of product sales mgr. for soft drink, beer and liquor bottles. Mr. Lindquist was formerly asst. national sales mgr. for multiple packaging—specializing in the soft drink industry—for the Folding Carton & Drum Div. **R. L. Chapman** has been promoted to Kansas City district sales mgr. for the Folding Carton Div. of Continental Can. He had been a sales representative for the div. in Kansas City and succeeds **J. H. Klamer**, who has resigned.

Lindquist

Western Paper Box Co., Hayward, Calif., has promoted **Fred Kewell II** to pres. and **Clifford D. Allen** to v.p.

Southern Bag Corp., Yazoo City, Miss., has appointed **Julius Griggs** as gen. sales mgr. and **E. Ray Sherrard** as sales mgr. for national accounts. The company manufactures multiwall bags.

Glen Rogers becomes director of design for **Foils Packaging Corp.**, Cincinnati. The firm has developed a food packaging machine—the Paktronic—which reportedly fills and electronically seals containers twice as fast as by conventional means. Mr. Rogers was formerly associated with the **C. W. Zumbiel Co.**, Norwood, O., container manufacturer and printer.

Plax Corp., Hartford, is erecting 146,000-sq.ft. plant on a 15-acre site at Yardville, N. J. The supplier of Tuckahoe, N.Y., died on June 21. Mr. Jiannott, 46, had served the pharmaceutical firm for 22 years.

The Container Div. of **International Paper Co.**, New York, will build a new plant in Pittsburgh for the manufacture of corrugated shipping containers. The installation is designed to service customers in West Virginia, western Pennsylvania and eastern Ohio.

A new industrial-adhesives plant has been opened in Portland, Ore., by **Arabol Mfg. Co.**, New York. The plant is under the direction of **Spencer Tilden**, who also is v.p. of the supplier company's Pacific Coast Division.

Aerosol Techniques, Inc., Bridgeport, Conn., has doubled its operational area with the acquisition of land adjacent to its current plant. The company is a producer of aerosol cosmetics, household aids and chemical specialties.

The **Wrap-King Div.** of **Crompton & Knowles Packaging Corp.** is now located in a new plant whose address is Suffield St., Agawam, Mass. The packaging machinery supplier's new facility has twice the floor space of its former location in Holyoke, Mass.

The Glidden Co., Cleveland, has changed the name of its Paint Div. to the Coatings and Resins Div. This move was undertaken to propertly describe the functions of the division, says Glidden. The division produces can coatings and supplies resins and foams.

Samuel M. Langston Co., Camden, N. J., has moved the manufacture of all Greenwood printer-slotters and parts from Baltimore to Camden and has dissolved its wholly owned sub., **Greenwood Engineering Co.**

Uni-Valve Corp., Franklin Park, Ill., has entered the packaging field as a manufacturer of aerosol valves. The firm is marketing a valve which reportedly reduces inventory requirements for special valves by eliminating the necessity for metering holes or slots and which is said to provide versatility of flow and spray patterns.

As part of a new concentrated approach to the sales of packaging materials for use in food stores, **The Dobeckmun Co., div. The Dow Chemical Co.**, Cleveland, has named **Nason E. Allen** to the new post of market mgr. for food-store packaging. He will be responsible for creating and directing all merchandising programs in this area. He will also have charge of all sales to food stores and distributors. Mr. Allen has named his former asst. **Robert R. Gilbert**, to the post of distributor sales mgr., reporting directly to him. **Earl F. Schimkola**, product mgr. for polyethylene film and film products, has been given responsibilities in the area of national account sales. **Wilbur Lenox**, sales prom. mgr., will succeed him. Mr. Schimkola will work on special assignments which require direct sales contact with large national accounts. Dobeckmun has also named **Campbell W. Finley** as asst. to **Karl E. Prindle**, v.p. for research and product development.

Allen *Gilbert*

Schimkola *Lenox*

Dean Stenberg, formerly sales mgr., is now mgr. of the packaging-equipment operation of **Sundstrand-American Broach, Div. Sundstrand Corp.**, Ann Arbor, Mich. He succeeds **Don Branning**, who becomes mfg. mgr. of the firm's new Hydrostatic Div.

Ronald Ramsay, secy. of **Bemis Bro. Bag Co.**, St. Louis, has retired after a 35-year career with the company. Mr. Ramsay joined Bemis as an accountant in 1926. He served as asst. treas. and comptroller before becoming secy. Mr. Ramsay is succeeded by **J. T. Braxtan**, formerly asst. secy. **Russell W. Hauck** has been named product development mgr. for Bemis' paper specialty plants. He will be responsible for product and new-use development.

Ramsay *Bemis*

F. G. Bemis, Jr., director of allied operations for Bemis has been elected a v.p. of the company. He will continue to direct allied operations and his headquarters will remain at the Boston offices. **John S. Whitney** has been named Western regional sales mgr. for **Air Formed Products Corp.**, Nashua, N. H., a Bemis sub. Mr. Whitney will be headquartered in Chicago.

The **Lily-Tulip Cup Corp.**, New York, has started construction of a new 900,000-sq.-ft. plant at Holmdel, N. J. The new facility will replace the company's College Point, N. Y., plant and associated Bronx warehouse.

Reynolds Metals Co., Richmond, Va., is increasing by 50% the capacity of its Bellwood, Va. foil printing plant.

A new West Coast facility for sales representation, technical service and delivery has been opened by **F. J. Stokes Corp.**, Philadelphia. **F. Theodor Hahn** has been appointed district mgr. in charge of the new operation, which is located in Pasadena, Calif.

Alan Berni & Associates, Inc. New York, industrial design, has moved to new and larger quarters at 733 Third Ave., New York 17.

Abbott Plastic Machine Corp. has moved its main plant and exec. offices from 7124 N. Clark St. to 2718-26 Broadway in Chicago. The company manufactures skin-packaging equipment and pressure-forming and die-cutting machinery.

Rap-In-Wax Co., Minneapolis, has changed its name to **Rap Industries, Inc.** The new name, says management, more accurately reflects the nature of the company, which started in 1926 as a bread-wrapper producer, but has since entered into the fields of extrusions and laminations of foils and films with paper. The company will retain the Rap-In-Wax name for consumer rolls of waxed paper.

The **Paul L. Karstrom Co.**, Chicago, and its sub., **Spee-Dee Packaging Machinery Corp.**, have been purchased by **Herbert F. Techtmann** and merged in-

[*Continued on page 166*]

ersatility

YOU CAN DO MORE PACKAGING JOBS BETTER WITH

Rhinelander Glassine & Greaseproof

Rhinelander Glassine and Greaseproof papers are featured in many packaging roles. Their basic grease resisting properties and their compatibility with other materials in coating, waxing or laminating provide a full range of protective packaging to fit your exact requirements and equipment at a low cost.

Write for your free copy of "Have Paper—Will Protect", Rhinelander's Western-style application booklet featuring the Twin Protectors—Glassine and Greaseproof.

RHINELANDER

RHINELANDER PAPER COMPANY • Rhinelander, Wisconsin • *Division of St. Regis Paper Company*

RISDON VALVE QUALITY IS VITAL INSURANCE

The payoff point for all the time and money invested in your aerosol product is at the fingertips of the user. That is where repeat sales are made or lost.

When your customer pushes the actuator, the performance-insuring quality of a Risdon valve becomes vital. And nothing less than Risdon quality gives full assurance of customer-pleasing results over the entire life of the package. An inferior valve can turn out to be your most expensive "bargain".

Risdon quality... performance-proven on many millions of packages... is the result of extensive scientific research and development. It is zealously guarded at every stage of valve manufacture by Risdon's uncompromising quality control.

Most *leading* aerosol packagers keep their success secure by using only Risdon valves to dispense their products.

Contact Risdon for specific information on the valve for your product.

Write For Free Booklets
On RISDON Valves

FOR Pressurized Products Packaged in Glass, Metal or Plastic Containers.

DISPENSING Conventional Aerosols, 3-Phase Products, Alcohol Base Products, Water-Base Products, Foam Products, Powder Sprays, Metered Sprays, Ultra-Low Pressure Applications, Products Containing Propellent Emulsions or Dispersions, etc.

RISDON

THE RISDON MANUFACTURING CO.
Valve Division • Naugatuck, Conn.

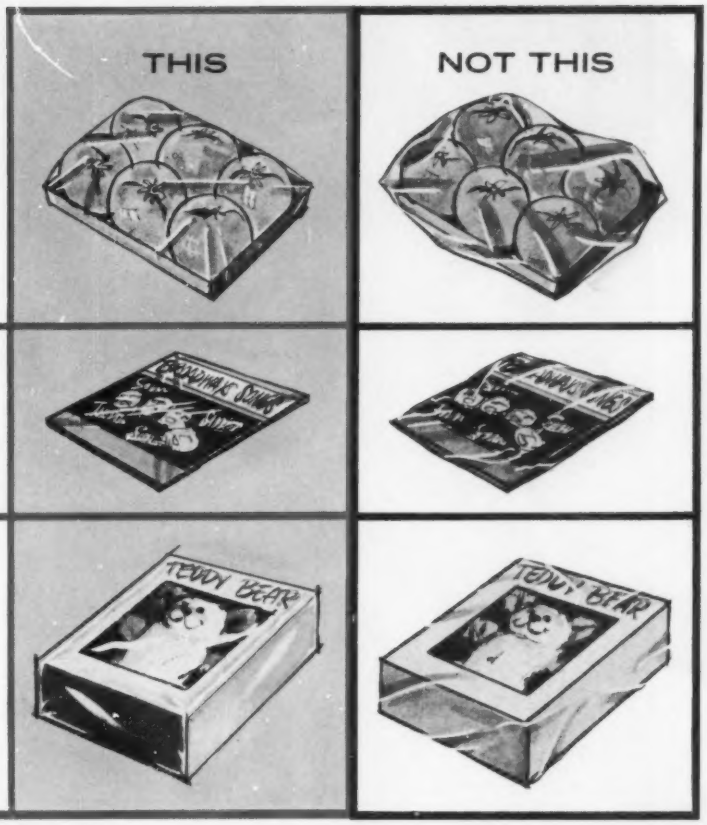
RI-103

FOR CRYSTAL-CLEAR,

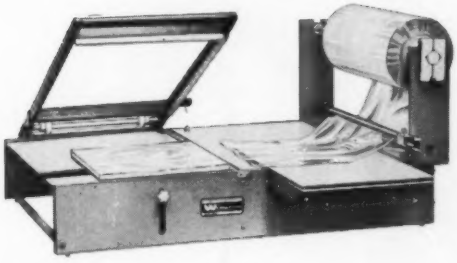
SKIN-TIGHT PACKAGING

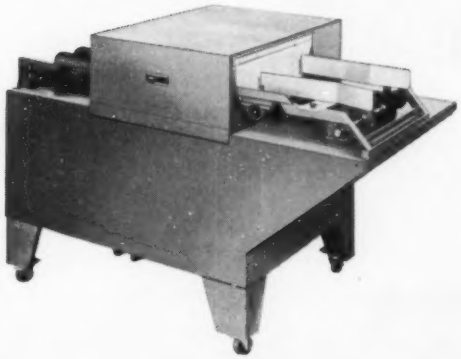
that keeps its

"JUST-ARRIVED" LOOK



WELDOTRON SHRINK PACKAGING EQUIPMENT





More and more manufacturers are turning to shrink packaging in order to produce skin-tight, crystal-clear contour packages for a wide variety of different size and shape products. A full range of shrink films is currently available to suit every packaging need — And Weldotron has developed a line of equipment to seal and shrink these films. It gives you packages that protect and show off your product, maintaining a "just arrived" appearance.

WELDOTRON L SEALERS

Our engineers have developed a full line of manual and semi-automatic thermal impulse sealers which, with each stroke, form a complete package from V-folded or single rolls of *shrinkable or regular films*. These Weldotron impulse sealers are the best type for use with shrinkable films because they heat and cool extremely fast, resulting in clean, strong seals.

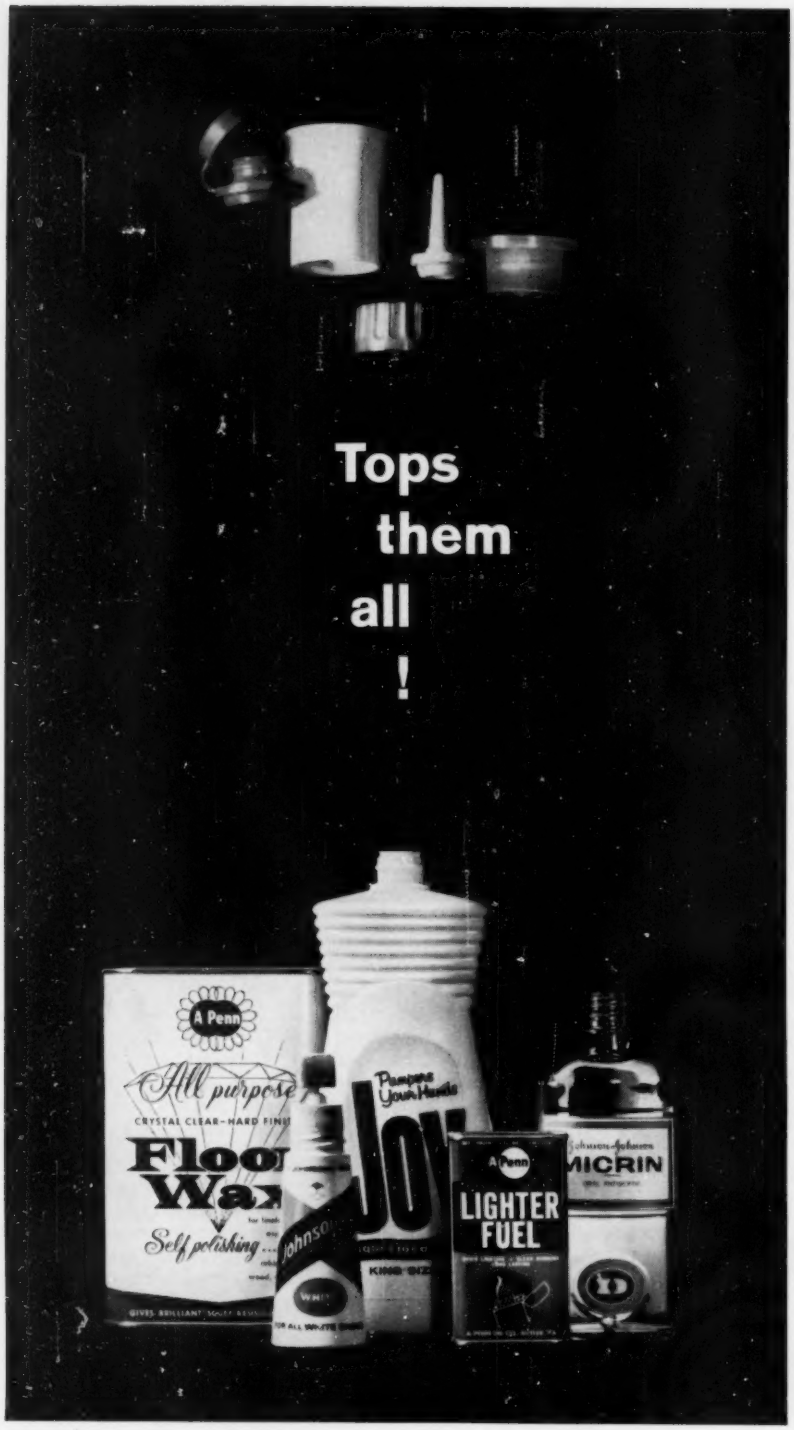
WELDOTRON HEAT TUNNELS

When a package, large or small, has been sealed, the Weldotron Heat Tunnel will shrink it to a perfect contour fit because its high velocity recirculating heated air reaches all surfaces evenly. There are thermostatic controls for setting and maintaining exact temperature. Featuring fast, economical, trouble-free operation, the Weldotron Heat Tunnel has variable conveyor speed up to 60 FPM. It has the highest speed available commercially and can be used for all shrinkable films.

For more information on Weldotron shrink packaging equipment, please write today outlining your requirements.

WELDOTRON *Corporation*
PACKAGING DIVISION

909-A Frelinghuysen Avenue, Newark 14, N. J.



WHENEVER YOU NEED CLOSURES—stock or custom, for your wax, detergent, liquor, shampoo, polish, or other containers—Pittsburgh propylene, styrene, or polyethylene caps are idea-engineered to "top them all". Send for your sample kit of stock closures.

PITTSBURGH PLASTICS

DIVISION – THE HEEKIN CAN COMPANY P.O. Box 28, New Castle, Pa.—412 KE 5-4358
Sales Offices: New York, 10 E. 40 St.—LE 2-9611 · Cincinnati · Philadelphia · Chicago

Plants & People

[*Continued from page 162*]

to a single entity, the **Karstrom Co.** The firm, which designs, manufactures and sells Spee-Dee packaging machinery, has relocated in new quarters at Menomonee Falls, Wis.

McGinley

Crown Cork & Seal Co., Philadelphia, has appointed **Gerald H. McGinley** to the post of mktg. mgr. for machinery sales. He will be attached to Crown's Baltimore office. He has been with Crown since 1958, serving as a district sales representative in New York. Previous to this he was on the administrative staff of W. R. Grace Co., New York.

The **Brown Machine Co.**, Beaverton, Mich., manufacturer of vacuum forming, trimming and other equipment for the plastics industry, has completed a new building that will more than double the firm's former capacity.

H. B. Fuller Co., St. Paul, manufacturer of industrial adhesives, has moved into expanded West Coast facilities in Portland, Ore.

MRM Co., Inc., manufacturer of labeling machines and filling equipment for liquid and viscous products, will move shortly from 191 Berry St., Brooklyn, to Plainview, L. I., N. Y.

Photomation, Inc., maker of electronic control devices used on packaging lines, has moved its executive, manufacturing and engineering facilities from Bergenfield, N. J., to Mountain View, Calif.

Plans for a food-research laboratory and pilot plant in Oak Brook, Ill., which will house 100 scientists and technicians, have been made known by **Armour & Co.**, Chicago. The facility will include a packaging-materials section.

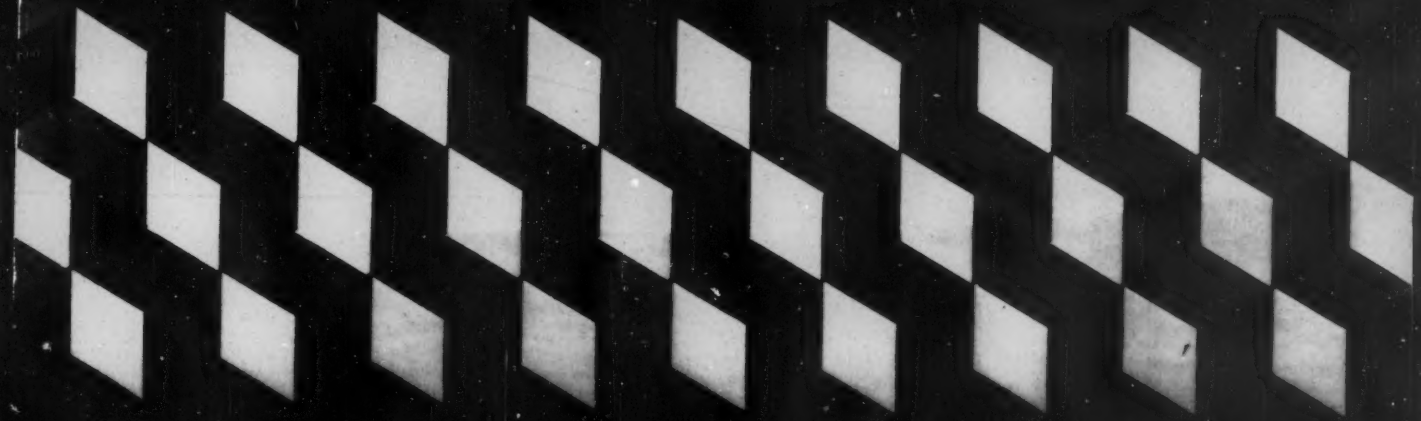
Georgia Pacific Paper Co., Portland, Ore., has acquired **White Containers, Inc.**, Monticello, Iowa. White makes corrugated containers.

Golden

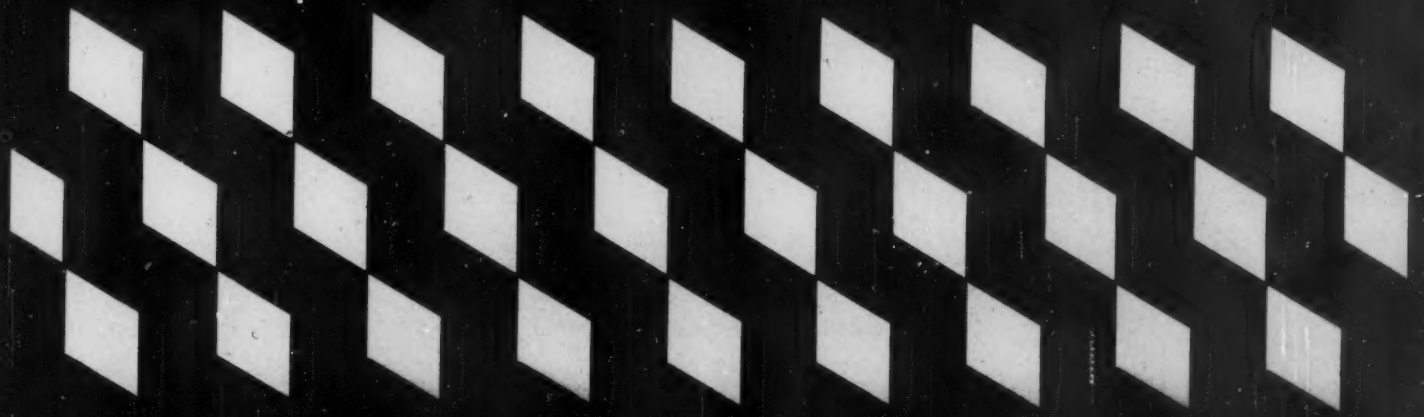
Frank Golden has been appointed to the newly created position of gen. mgr. of domestic purchasing and packaging for **Chesebrough-Ponds Inc.**, New York. For the past five years Mr. Golden has been mgr. of packaging and merchandise services for **General Foods Corp.**, White Plains, N. Y. A 10-year **Packaging Institute** member, Mr. Golden is chairman of the **Gravure Technical Assn.**'s consumer relations committee.

Rheem Mfg. Co.'s Container Div. has opened a new Research & Technical Service Center in a separate building at the div.'s headquarters in Linden, N. J. Research and development operations were formerly located at the

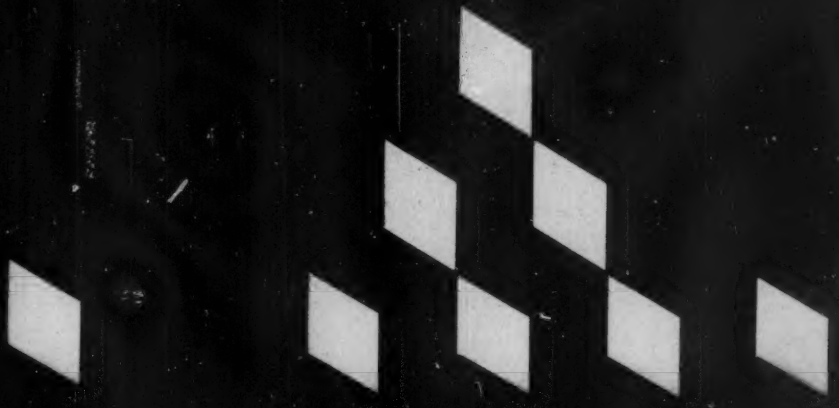
[*Continued on page 172*]



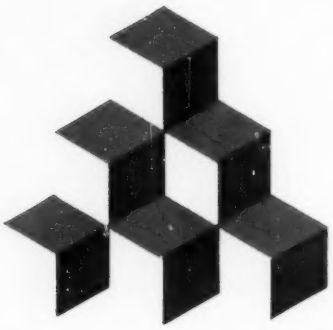
Now you can buy the protection,



beauty



and faster turnover
of Foil Laminates



The crisp, fresh protection of foil-laminated packaging, the attention-demanding beauty of graphics on foil and the high impulse impact of laminated foil overwraps can help give your product these selling advantages at all distribution levels.

Alcoa's new $1.5 million expansion of facilities in Davenport, Iowa, gives you a new, major source for your Alcoa® Foil lamination requirements in combination with paper, wax, paperboard and plastic materials.

This expansion, backed by Alcoa's famed research properties, is organized to help you (on a custom basis) arrive at profit answers to problem areas. Whether you need a higher product standard of nonoffsetting, smoothness, brightness and uniformity; or if you're looking for a guarantee of more good yards per shift . . . more good yards of print-treated foil for adherence to gravure inks or vinyl-coated lacquers; or if varying sealing temperatures, strengths or bleedproof splicings are your areas of concern; buy direct from Alcoa.

Alcoa controls quality from ingot to laminations at one location to meet your specifications for sales . . . to meet your specifications for beauty, protection and turnover.

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FOIL LAMINATIONS

Entertainment at Its Best
ALCOA PREMIERE with Fred Astaire as Host
Tuesday Evenings, **ABC-TV**

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CHARLOTTE 2, N.C.....1000 Wachovia Bank Bldg.
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CHICAGO 11, ILL.....520 North Michigan Ave.
CINCINNATI 6, OHIO.....Alcoa Bldg., 2331 Victory Parkway
CLEVELAND 13, OHIO.....1450 Terminal Tower
COLUMBUS 15, OHIO.....230 Bryson Bldg.
DALLAS 1, TEXAS.....1900 Fidelity Union Tower
DAVENPORT, IOWA.....601 Brady St.
DAYTON 5, OHIO.....207 Northtown Arcade
DENVER 3, COLO.....309 Moore Bldg.
DES MOINES 12, IOWA.....3620 Ingersoll Ave.
DETROIT 2, MICH.....610 New Center Bldg.
FLINT 2, MICH.....510 Mott Foundation Bldg.
FORT WAYNE, IND.....2924 South Calhoun St. Bldg.
GARDEN CITY, N.Y.....1001 Franklin Ave.
GRAND RAPIDS 2, MICH.....812 Michigan National Bank Bldg.
HARTFORD 5, CONN.....1049 Asylum Ave.
HOUSTON 2, TEXAS.....1310 Texas Eastern Bldg.
INDIANAPOLIS 7, IND.....2939 North Meridian St.
JACKSON, MICH.....310 National Bank Bldg.
KANSAS CITY 5, MO.....2300 Power & Light Bldg.
LAFAYETTE, IND.....P.O. Box 500
LIMA, OHIO.....901 National Bank Bldg.
LITTLE ROCK, ARK.....414 Pulaski St.
LOS ANGELES 17, CALIF.....1145 Wilshire Blvd.
LOUISVILLE 2, KY.....1152 Starks Bldg.
LUBBOCK, TEXAS.....203 Field Bldg.
MEMPHIS 17, TENN.....4515 Poplar Ave.
MIAMI (HIALEAH), FLA.....490 Hialeah Drive Bldg.
MILWAUKEE 3, WIS.....2040 West Wisconsin Ave.
MINNEAPOLIS 24, MINN.....4010 West 65th St.
NASHVILLE 12, TENN.....235 Wilson-Bates Bldg.
NEWARK 2, N.J.....744 Broad St.
NEW ORLEANS 12, LA.....1225 Whitney Bldg.
NEW YORK 17, N.Y.....230 Park Ave.
OAKLAND 8, CALIF.....1001 46th St.
OKLAHOMA CITY 3, OKLA.....111 N.W. 23rd St.
OMAHA 2, NEBR.....746 Omaha National Bank Bldg.
PEORIA, ILL.....614 Commercial Bank Bldg.
PHILADELPHIA 2, PA.....1800 Two Penn Center Plaza
PHOENIX 4, ARIZ.....702 First National Bank Bldg.
PITTSBURGH 20, PA.....875 Greentree Road
PORTLAND 4, ORE.....1115 U.S. National Bank Bldg.
PROVIDENCE 3, R.I.....2503 Industrial Bank Bldg.
RICHMOND 30, VA.....908 North Thompson St.
ROCHESTER 18, N.Y.....Erdle Bldg.
ST. LOUIS 8, MO.....10th Floor, Continental Bldg.
SAN DIEGO 3, CALIF.....2962 Fifth Ave.
SAN FRANCISCO 4, CALIF.....2509 Equitable Life Bldg.
SEATTLE 1, WASH.....1411 Fourth Ave. Bldg.
SOUTH BEND 1, IND.....805 J.M.S. Bldg.
SPOKANE 1, WASH.....610 Fidelity Bldg.
SPRINGFIELD 3, MASS.....508 Tarbell-Watters Bldg.
SYRACUSE 1, N.Y.....731 James St.
TAMPA 9, FLA.....4202 Henderson Blvd.
TOLEDO 2, OHIO.....350 W. Woodruff Ave.
WASHINGTON 6, D.C.....1200 Ring Bldg.
WHITE PLAINS, N.Y.....180 South Broadway
WICHITA 2, KAN.....1010 Central Bldg.
WILMINGTON 1, DEL.....825 Bank of Delaware Bldg.
WORCESTER 8, MASS.....22 Pleasant St.
YORK, PA.....205 Manufacturers Bldg.
YOUNGSTOWN 3, OHIO.....537 Ohio Edison Bldg.

LERMER RIGID PLASTIC CONTAINERS OFFER UNIQUE PACKAGING ADVANTAGES FOR DRUGS, SUNDRIES, FOODS, INDUSTRIAL AND ELECTRONIC PARTS

For the utmost in ease of packaging, visibility, safety and protection, nothing compares with the desirable features of Lermer RIGID plastic containers.

• Printed or decorated up to 4 colors on crystal clear, transparent or opaque colors • Largest line of RIGID plastic containers • 1/5 the weight of glass — greatly reducing ever-increasing shipping and handling costs • Lightweight and shatterproof — with rigid wall protection • Economical—with customer re-use value • Also made of new high density polyethylene — Poly-Opal*. Are chemically inert, stain resistant and have lower permeability to moisture and gases than conventional polyethylene. **Also a complete line of flexible acetate containers.** *T.M.

Write for full-color catalog, samples and prices.

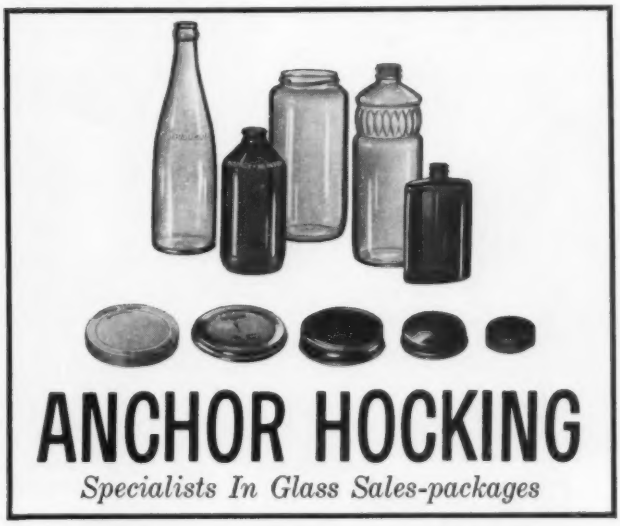
LERMER PLASTICS, INC.

502 South Avenue, Garwood, New Jersey

PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS SINCE 1919

Your Anchor Man brings you all the benefits of SPECIALIZATION in glass packaging

In short, this means uniform, high quality glass containers, closures and sealing machines . . . specialized technical service and prompt deliveries . . . all resulting in efficient, economical production and dependable protection for your products. For more details contact your Anchor Man or write Anchor Hocking Glass Corporation, Lancaster. Ohio.



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Specialists In Glass Sales-packages

Anchorglass Containers—crystal, amber, emerald green, georgia green—all standard styles, sizes and finishes.

Metal Closures—vacuum, twist, screw and lug types.

Molded Closures—stock and private design in a wide range of colors, featuring liner retaining ledge.

Sealing Machines—automatic and semi-automatic—vacuum and non-vacuum—speeds 30 to 1000 per minute.

The people from
GARDNER
are close at hand!

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TRemont 1-1753

CHICAGO, Illinois
65 East South Water Street
DEarborn 2-6344

CLEVELAND 15, Ohio
1038 Hanna Building
CHerry 1-5851

GREENSBORO, North Carolina
1813 Pembroke Road
BRoadway 5-3311

MIDDLETOWN, Ohio
407 Charles Street
GArden 2-2772

MINNEAPOLIS 2, Minnesota
1055 Rand Tower Building
FEderal 5-7755

NEW YORK 36, New York
500 Fifth Avenue
CHickering 4-4477

PHILADELPHIA 2, Pennsylvania
225 South 15th Street
PEnnypacker 5-3950

PITTSBURGH 22, Pennsylvania
302 Bessemer Building
GRant 1-4675

ST. LOUIS 5, Missouri
8000 Bonhomme Avenue
PArkview 1-1726

Folding paperboard packaging

GARDNER
A DIVISION OF DIAMOND NATIONAL CORPORATION MIDDLETOWN, OHIO

Plants & People [*Cont'd*]

div.'s Chicago plant. The new facility will expand the company's studies of new processes and techniques for the application of interior and exterior coatings to containers. Basic research and new package evaluation will also be undertaken in the new laboratory.

Philip O'C. White has retired as gen. mgr. of the **White Cap-Bond Crown** Div. and a v.p. of **Continental Can Co.**, New York. The division, which is located in Chicago, was founded in 1926 as White Cap Co. by Mr. White and his brothers. He was pres. of the firm until its affiliation with Continental Can in 1956. Succeeding him in both positions is **Robert P. White**, who has been with the company for 20 years and most recently was v.p. for sales.

P. White *R. White*

Packaging Corp. of America's common stock was listed for trading on the New York and Midwest Stock Exchanges on Aug. 29. Its ticker symbol is PKG. The company was founded two years ago with the merging of **American Boxboard Co.**, **Central Fibre Products Co.** and **Ohio Boxboard Co.**

Weyerhaeuser Co., Tacoma, Wash., has completed the expansion of its facilities for pulp, paperboard and container research. The expansion consists of a new two-story wing on the original pulp research building (increasing laboratory space 50%) as well as the installation of a new pilot coating machine, related operating equipment and hot-dry and cold-moist environments for testing existing products and those under development. Additions are also being made to the research staff.

Pak-Rapid pouch- and strip-packaging machines manufactured by **Pak-Rapid, Inc.**, West Conshohocken, Pa., are now marketed by **Wright Machinery Co., Div. Sperry Rand Corp.**, Durham, N. C.

The Film Div. of **American Viscose Corp.**, Philadelphia, has opened a new district sales office in Cincinnati. The office will serve Ohio, Indiana, Kentucky and West Virginia. It will be managed by **Harry G. Alwine.**

Promotions

Eugene M. Tyndall: to gen. sales mgr., Southern operations, **Knox Glass, Inc.**, Knox, Pa. He will headquarter at the company's Jackson, Miss., office.

Frank G. Bertics: to asst. Midwestern regional sales mgr., **Union Carbide Plastics Co., Div. Union Carbide Corp.**, New York. He will supervise sales activities for Bakelite plastics.

G. William Colvin: to gen. mgr. of Southeastern Div. corrugated-shipping-container plants; **Albert L. Ahlers:** to gen. mgr. of Central-East Div. corrugated-shipping container plants, both **Container Corp. of America**, Chicago.

J. Thomas Schank: to gen. sales mgr., **Paslode Co., Div. Signode Steel Strapping Co.**, Chicago. Paslode manufactures stapling and fastening equipment.

Robert N. Shreve: to southern industrial district mgr., **Wood Conversion Co.**, St. Paul, Minn. Mr. Shreve will make his headquarters in Atlanta. The company manufactures and markets cushion padding.

Donald O. Sensenbach: to gen. mgr. of Engineering & Machine Div., **St. Regis Paper Co.**, New York. He succeeds **R. McKim Browning**, resigned.

Clarence Bickel, Robert Kline and Ralph Ward: to newly created posts of regional mgr. for **F. G. Findley Co.**, Milwaukee. Mr. Bickel is now responsible for Illinois and the South Central states, Mr. Kline for the East Central states and Mr. Ward for the West Central states. The firm manufactures packaging and paper-converting adhesives.

Ann Wilkes: to sales prom. asst., film operations of the Packaging Div., **Olin Mathieson Chemical Corp.**, New York.

Appointments

Lloyd T. Krumm, Jr.: to asst. to the v.p., **International Paper** New York.

Lois Gauthier: to special projects asst. to the advtg. and prom. mgr., film operations of the Packaging Div., **Olin Mathieson Chemical Corp.**, New York.

Lawrence L. Ellis: to admin. asst. to **Colin Gardner III**, gen. mgr. of **Standard Packaging Corp.**'s Mills Group, New York.

Robert H. Laauwe: to New York regional sales mgr., **Puritan Aerosol Corp.**, Boston. Puritan offers private-label and contract aerosol packaging.

Thomas Strickland, Jr.: to Southeastern regional sales mgr., and **I. M. Brooks:** to Southwestern regional sales mgr., **Bryce Packaging, Inc.**, sub. **Riegel Paper Corp.**, New York.

Lew Winter: to director of technical services, **Floseal Corp.**, San Francisco.

Spiro Vass, Joseph Scalia and Ottie W. Lemerise: to engineering and research and development depts. of **Sterling Seal Co.**, Erie, Pa.

Harry Fusco: to asst. sales mgr., **Plastic Papers, Inc.**, Hicksville, N. Y.

Richard C. Hum: to Eastern packaging & technical consultant, **Bradley & Vrooman Co.**, Chicago.

Obituaries

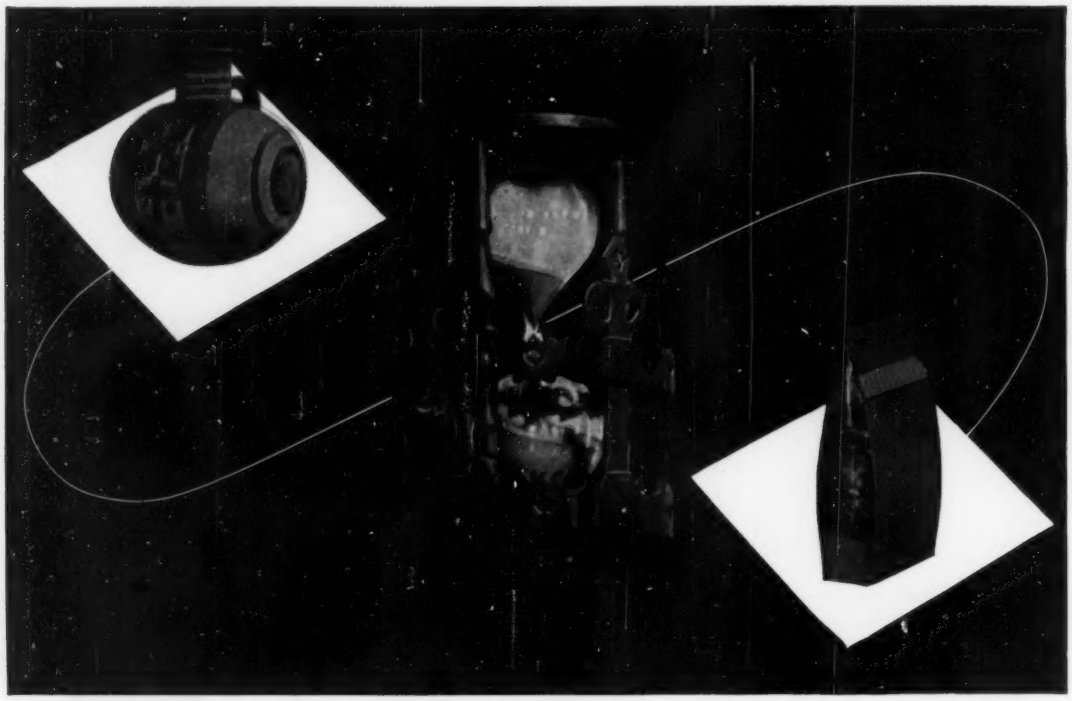
C. Wilson Wood, founder of the Baltimore paper and flexible packaging sales agency of the same name, died recently at his summer home in West Springfield, N. H. He was 74 years of age. Mr. Wood had been active in the paper industry since 1915 and founded **C. Wilson Wood, Inc.** 35 years ago.

GARDNER

"It's the people from **GARDNER** . . . they've just shown us their solutions to our packaging problems. Beats anything how they can clarify our problem in understandable terms and come up with the answers! The packaging they've recommended looks good to everybody: our Production people know it will work and our Marketing men agree it will sell. What more could you ask? Gardner's Persuasive Packaging service means business!"

Write, wire or phone your Gardner sales representative for Persuasive Packaging service.

GARDNER A DIVISION OF DIAMOND NATIONAL CORPORATION · MIDDLETOWN, OHIO



PAST, PRESENT AND FUTURE

in transparent film packaging . . . tremendous experience amassed over the years, and continuous research today, enabling us to lead the way in new development — these are the factors that guarantee you the most knowledgeable, most useful opinion on your own particular packaging problem. Do you want advice on the transparent packaging film that will suit your product best? We have scientists and technicians, the foremost in their field, to help you select the appropriate one. They may suggest cellulose film in one of its many types. Perhaps you may need BCL polythene film. Or your product may be an 'awkward' one — something you thought could never be packaged visibly . . . like a liquid, a cream or paste, a powder; acid, alkali, grease, salt; a heavy, sharp article. In this case we should probably recommend polythene-coated cellulose film or one of our new plastic films.

Contact us now for further details and samples of our films. And if you need practical help to use them to best advantage, we are ready and keen to co-operate with you.

BCL

BRITISH CELLOPHANE LIMITED

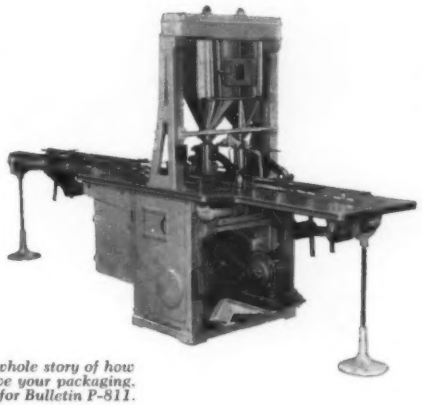
Henrietta House, 9 Henrietta Place, London, W.1, England

'Cellophane' is the registered trade mark of British Cellophane Limited in the following countries: U.K., Jersey and Guernsey, Commonwealth of Australia, Ceylon, Cyprus, Denmark, Eire, Federation of Malaya, Federation of Rhodesia and Nyasaland, Gibraltar, Hong Kong, Iceland, India, Jamaica, New Zealand, Pakistan, Singapore, Trinidad and Tobago, Union of South Africa.

Everything on this table was packaged by Avon with FMC Auger Fillers

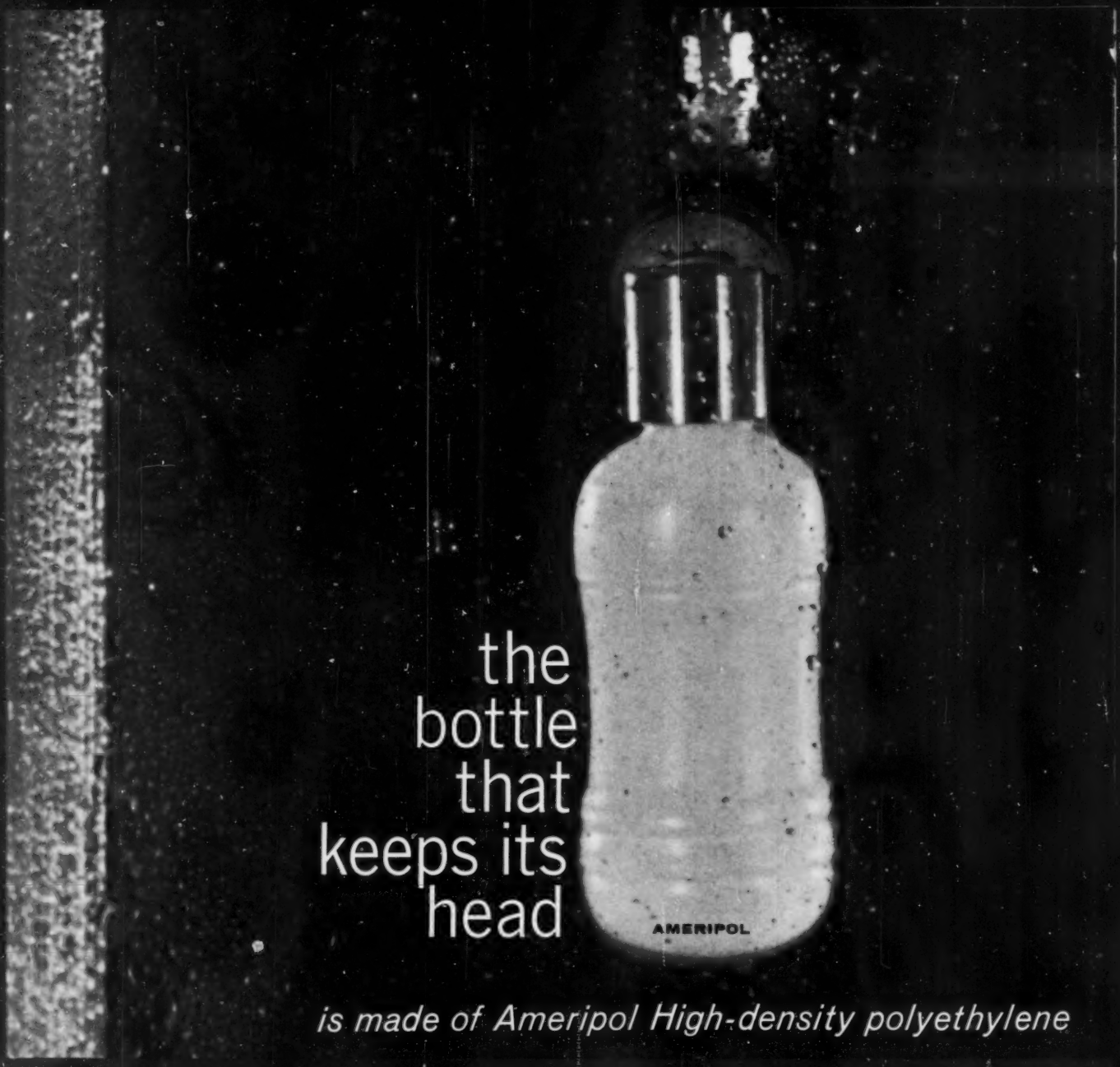
Avon Products, Inc. uses a total of 23 FMC Auger Fillers in 4 different plants throughout the United States and Canada. With these machines they fill hard-to-handle powders and talcs in a variety of container types and range of sizes. When the Avon Lady calls, the odds are substantial that everything she spreads out on the coffee table was filled on an FMC Auger Filler.

Six of the FMC machines used by Avon are Duplex Auger Fillers model HG-84. Completely automatic, this model is designed with a choice of filling methods—cam volumetric, gross weighing, or auger combined with vacuum for pack-filling dusty products—at speeds up to 70 containers per minute. Many other models are available for large or small plants, automatic or semi-automatic operation, tight or loose fills, long or short runs to handle almost any powder or granular product and certain pastes. Production run accuracy has proved outstanding in filling cans, jars, boxes, bags, etc. from ½ oz. to 20 lbs. Changeover for product and size is exceptionally fast and simple. Speeds as high as 140 per minute.



For the whole story of how FMC Auger Fillers can improve your packaging, write for Bulletin P-811.

FMC CORPORATION
PACKAGING MACHINERY DIVISION
Stokes & Smith Plant: 4904 Summerdale Avenue, Philadelphia 24, Pa.



the bottle that keeps its head

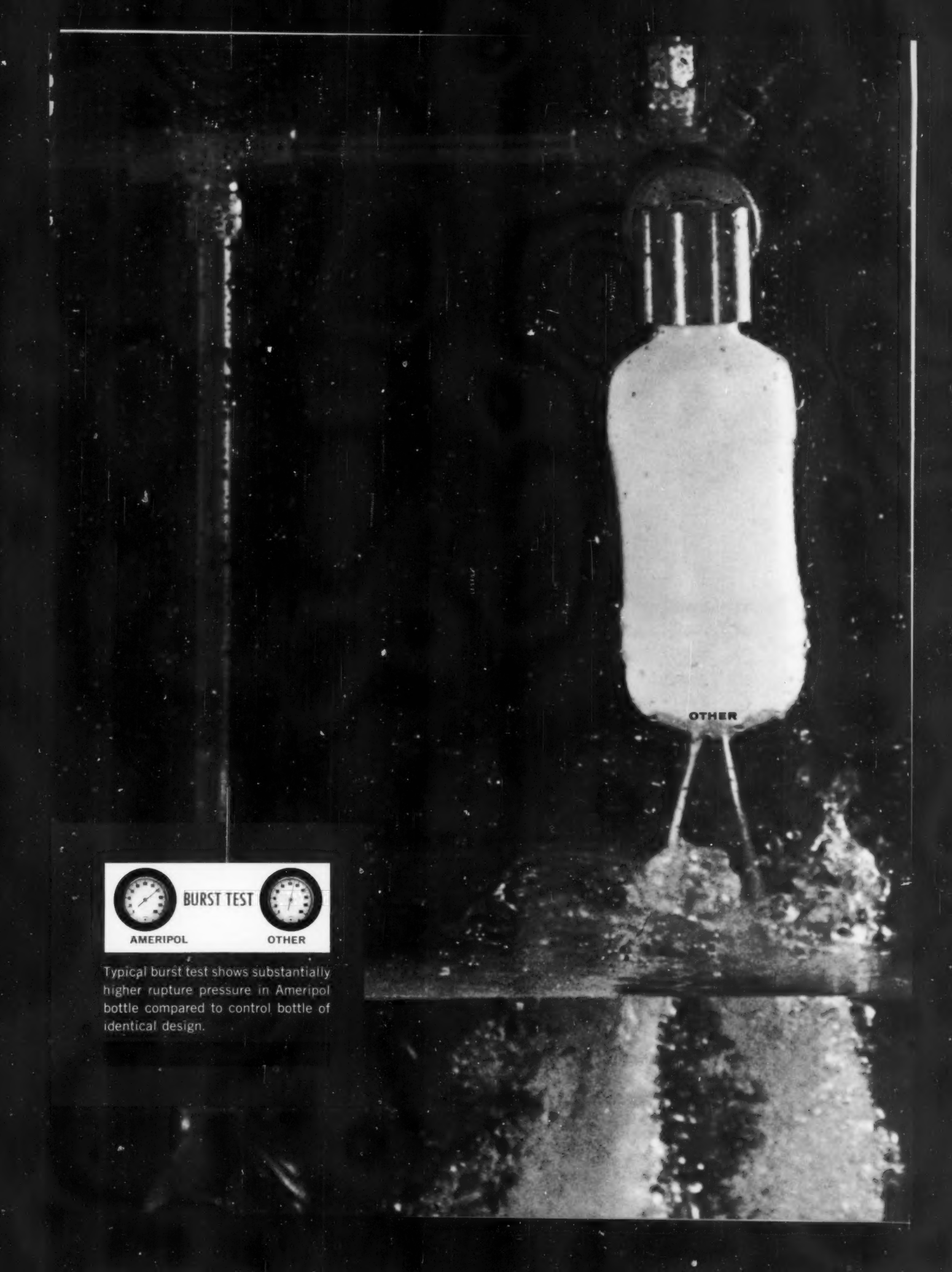
is made of Ameripol High-density polyethylene

In the dramatic torture test shown here, identical containers were blow-molded from Ameripol high-density polyethylene . . . and from another high-density material. The Ameripol bottle and the control bottle were then subjected to an increasing head of hydraulic pressure. In hundreds of test runs, the Ameripol bottle outlasted its opponent every time. When the control bottle ruptured, the Ameripol bottle was still pressure-tight. Then hydraulic pressure was again applied to the Ameripol bottle until it failed . . . at values ranging from 20% to 50% above the control bottle. This extra strength and durability of Ameripol high-density polyethylene can help you produce better quality containers and other blow-molded products at no extra cost. And Ameripol has one other outstanding advantage—it is easily processed on conventional equipment. For strong, beautiful blow-molded products check Ameripol. Write for Ameripol Technical Data file for complete physical properties and specifications. And, remember—Goodrich-Gulf Technical Service can help you with application.

Cleveland: 1717 East Ninth Street • Phone: TOwer 1-3500 **New York**: 200 East 42nd Street • Phone: Murry Hill 7-4255

Goodrich-Gulf Chemicals, Inc.

THE ONE TO WATCH FOR NEW DEVELOPMENTS



Typical burst test shows substantially higher rupture pressure in Ameripol bottle compared to control bottle of identical design.

SILICONE NEWS from Dow Corning

Sticky...but can't stick!

Even sticky peanut clusters don't stick to Syl-off coated paper.

How to improve packaging and processing of sticky products

When a product "sticks" around, it doesn't always make fast friends. Sometimes it makes trouble . . . slows production . . . boosts costs. And in the end, your customer may be unhappy. But no matter how sticky your product, you can keep it from sticking by using processing and packaging papers coated with Syl-off®, the new silicone release coating.

Ways you benefit. Faster, easier and cleaner handling result from using containers and process papers with Syl-off silicone release coatings. Candy, baked goods, dried fruit and a wide variety of sticky nonfood products—all come away easily and cleanly from paper and paperboard coated with Syl-off. Product loss and waste is minimized. Process operations are speeded. Satisfaction is increased all along the line.

Aid labelling, too. Pressure-sensitive labels, decorative trims, decals and similar selling or identification aids peel away from Syl-off coated backing papers without tearing or shredding . . . without loss of adhesive. Result: easier application; a neater job; more effective use of pressure-sensitive promotional material. No matter how sticky your product—or your problem—there's a Syl-off coated paper or paperboard available that will help you process or package more profitably. Write today for list of approved mills and converters.

For detailed information plus a list of sources of Syl-off coated papers, write Dow Corning Corporation, Dept. 8022, Midland, Michigan.

first in silicones

Dow Corning

MONEY GOES HIGH-FASHION

. . . in a package designed by Plastene

. . . Money is always in style, particularly when it's in an Amity Leather wallet. And what makes these wallets more appealing (even when empty) is the unique package they now come in—a molded styrene package designed and fabricated by Plastene.

This package, another Plastene 'first,' was created by one of Plastene's renowned designers, then precision-engineered and precision-fabricated by experienced Plastene craftsmen. Plastene's attention to detail, its broad skills and capabilities and its three plants strategically located in Crawfordsville, Ind., Norwich, Conn., and Anaheim, Calif., are a few of the reasons so many prominent firms order (and reorder) from Plastene. Such companies as The U.S. Time Corp. (Timex), Fram Corp., Sears Roebuck & Co., The American Thermos Products Company, Amity Leather Products Co., and Lily-Tulip Cup Corp., are among Plastene's satisfied customers.

Whatever your field, bring your packaging problems to Plastene for an economical, high-fashion solution. Plastene experts will work with you to create new packages in such materials as polypropylene, polystyrene, polyethylene, acrylic, acetate, delrin and nylon. Write today.

PLASTENE

Plastene Corporation, Crawfordsville, Indiana • Subsidiary of The American Thermos Products Company

EQUIPMENT & MATERIALS

[*Continued from page 58*]

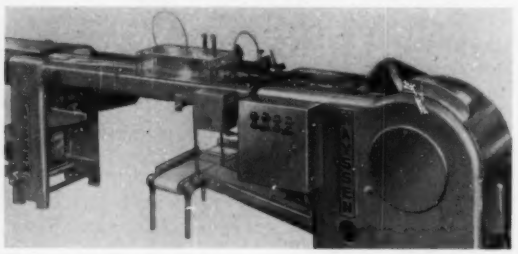
water that the concentrate is being mixed with. It is claimed that this provides an instant and lasting suspension throughout the liquid. Controlled viscosity is said to correlate the bacteria-free concentrate in the container with the size of the jet orifice and pressure of the propellant to ensure trouble-free operation over a long period of use. Besides food uses, the package has been tested for non-refrigerated aseptic storage and instant blended reconstitution of pharmaceutical products—especially germicidals, mouthwash and dietetic formulations, all-vitamin food supplements and products in other industries (such as detergents and ethical drugs). *Continental Enterprises, Inc., Jacksonville, Fla.*

Electronic packaging for small parts

A new electronic packaging service that is said to provide heat-sealed packets of screws and small parts at 10% of the cost of hand packaging has been developed by Abbott Screw & Mfg. Co. Called Electro-Pak, the service is reported to turn out imprinted, filled packets of automatically counted items at the rate of 6,000 per hour. Up to three different items can be included in a single packet. The packets are 4½ in. wide and range from 2 to 6 in. in length. Although a kraft paper-polyethylene laminate which can be imprinted to customer specifications is normally used, plain polyethylene is also available. The service uses vibratory counters and automatic packeting equipment and the units are said to be adjustable to meet various specific needs. Additional information is available from *Abbott Screw & Mfg. Co., 6525 N. Clark St., Chicago 26.*

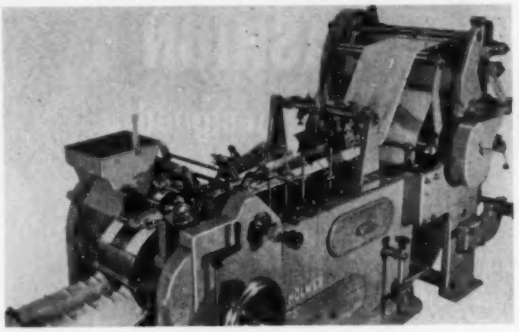
Single-portion packaging machine

Hayssen has developed a new and reportedly low-cost machine which packages individual portions of bakery products and similar items at claimed speeds of up to 100 bags per minute without using cards or other stiffeners. The horizontal, continuous-motion unit—known as the Hayssen RT—is said to handle a wide range of package sizes and shapes with no parts change other than 10-second removal or attachment of end-seal dies. The product pieces are fed to the unit on a conveyor. When they enter the machine they ride up on a "belt" formed by a web of the packaging material. The web is then folded up and around the product and heat-sealed to form a continuous tube. The tube is then picked up and pulled around a large drum. As the tube is wound onto the drum, a scissors-like sealing and cut-off die closes on the gap between the individual pieces of the product. After a half turn on the drum, the package is completely sealed, cut loose and deposited on a conveyor. Each product piece is reported to be measured by an electric eye. End seal dies automatically compensate for varying product lengths. Width of the package is self-adjusted to a large extent by the product itself and can be further altered by changing the roll of packaging material, the supplier notes. Height is said not to be critical and to be easily regulated by raising or lowering the seam seal die with a hand wheel. Machine speed is also said to be easily controlled and synchronized with the rest of the production line. *Hayssen Mfg. Co., Sheboygen, Wis.*



Improved bag-making machine

Conapac Corp., exclusive representative for Holweg equipment in the U. S., is marketing two new bag-forming machines that can be equipped for twin forming to increase production. Known as the Holweg Roto Simplex No. 1 and No. 2, the units offer central lubrication, a double-fold attachment for sift-proof bag bottoms, stainless-steel glue pots and driven center-seam applicator wheels. The photograph shows the RS-1 forming two bags simultaneously. The twin operation permits the manufacture of bags with a ½- or ¾-inch lip. Longer lips can be made with special perforating tools. The RS-2 offers a shear-cut unit to make flush-cut bags. A universal perforator is available for this model which wil make ½-, ¾- or 1½-in. lips. The company claims that, equipped with the twin-forming feature, the machines will increase their production by up to 80%. *Conapac Corp., 120 E. 13 St., New York 3.*



Re-usable foam-plastic packing trays

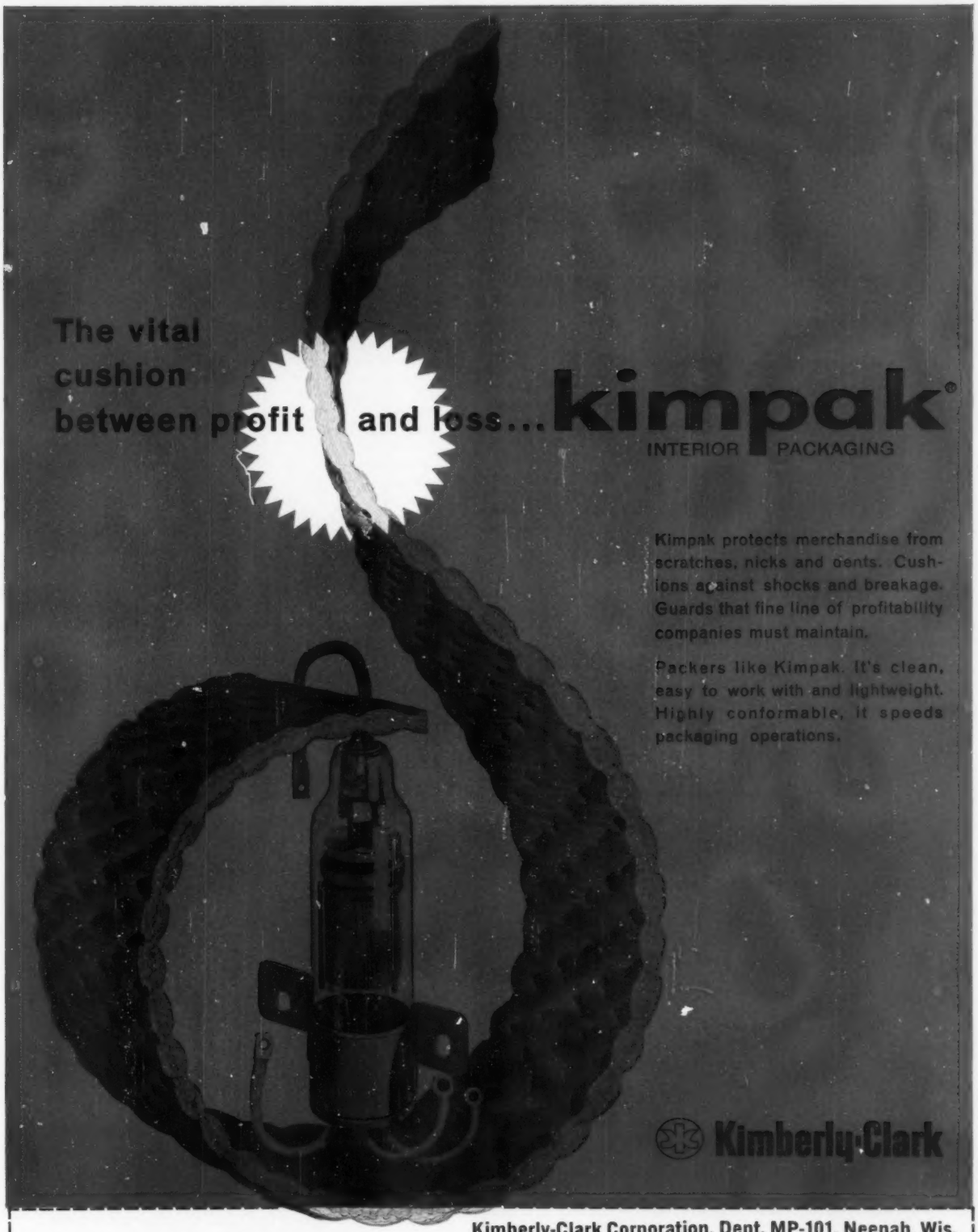
Pac-Tron, Inc. has developed re-usable foam plastic trays for the shipping of sensitive instruments. The Pac-Trays, as they are called, are custom designed of expanded, foamed plastic and are form-fitted to protect the delicate objects, the supplier notes. They may also be used as separators in shipping containers. Pac-Trim, the polyethylene-based plastic foam from which the trays are molded, is of closed-cell construction, is said to be unaffected by water, oil, gasoline or alcohol, and to be non-hygroscopic. The material will not deteriorate, "dust" or scratch; is light in weight and flexible, and has a controlled rate of rebound, the supplier notes. It is also reported to be inexpensive. The trays are especially suggested for manufacturers of gauges, timing devices, springs, bearings, gears, cutters, micrometers and the like. *Pac-Tron, Inc., Waltham, Mass.*

Modified polypropylene

Oleform, a modified polypropylene said to offer high performance at low cost, has been introduced by AviSun. It is expected to find many applications in areas where toughness and rigidity are required over a wide temperature range. The new polypropylene is cited for dimensional stability and creep resistance as well as excellent heat distortion values. It is also said to offer good chemical resistance and moisture absorption. The material processes as easily as unmodified polypropylene, says the supplier. Additional data on the polypropylene can be obtained from *AviSun Corp., 1345 Chestnut St., Philadelphia 7.*

Automatic pressure-forming machine

Abbott Plastic Machine has introduced an automatic in-line pressure-forming and die-cutting machine, designated APM 14-1. It is said to form any shape of rigid or semi-rigid plastic container, including blisters, from biaxially oriented and general-purpose polystyrene, acetate, butyrate, vinyl, polyethylene or polypropylene—in thicknesses from 0.002 to 0.030 in. It uses low-cost aluminum or epoxy molds and


The vital cushion between profit and loss...
kimpak®
INTERIOR PACKAGING
Kimpak protects merchandise from scratches, nicks and dents. Cushions against shocks and breakage. Guards that fine line of profitability companies must maintain.
Packers like Kimpak. It's clean, easy to work with and lightweight. Highly conformable, it speeds packaging operations.
Kimberly-Clark

FREE SAMPLE ROLL!

Kimpak now offers new and improved types—and most important, some lower in cost—to give you greater packaging economy. Send coupon today for FREE SAMPLE ROLL and full particulars.

Kimberly-Clark Corporation, Dept. MP-101, Neenah, Wis.

Please send sample roll of new 30" wide Kimpak interior packaging to try in my plant—at no obligation on my part.

NAME_____

FIRM_____

ADDRESS_____

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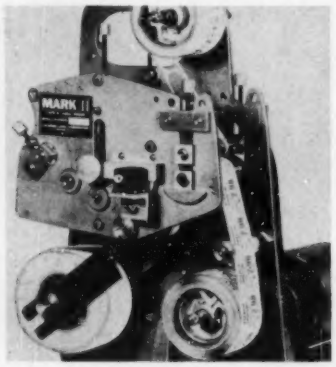
steel rule dies which can be changed in less than half an hour, the supplier notes. The forming area measures 13 by 14 in. Maximum feed length is 14 in., as is maximum web width. Machine cycle is 15 per minute. The pressure former has a normal stroke of 4 in. and a maximum hydraulic pressure of 2,000 p.s.i. The machine is said to tie in with production conveyor or packaging-line equipment. For further details, contact *Abbott Plastic Machine Corp., 7124 N. Clark St., Chicago 26.*

Pressure-sensitive label and tape press

Recently introduced by Columbia Label is the Mark II label and tape press, designed for firms using a large volume of pressure-sensitive labels or requiring a wide variety of copy changes. The unit prints, die cuts, removes waste and rewinds pressure-sensitive labels or tape at reported speeds of up to 150,000 labels per hour. It also is said to perform all necessary operations using plain tape or label stock—thus eliminating the need for pre-printed or die-cut labels — and thereby saving up to 80% in labeling costs and eliminating the need for large inventories. The press uses flexographic plates and will reproduce any copy, including half-tones, the supplier notes. Plate changes take less than 15 seconds and cutting dies can be changed in less than a minute, according to the company. The unit will print any size or shape label up to 2¼ by 12 in. on a wide variety of materials, including paper, film, foils and fabrics. The press weighs 60 lbs. and requires less than 2 sq. ft. of table space. Details on the new equipment are available from *Columbia Label Corp., 4755 N. Talman Ave., Chicago 25.*



Vinyl-backed strapping tape

A new vinyl-backed glass-reinforced strapping tape, now available from Johns-Manville, is said to offer superior abrasion and weather resistance as well as high tensile strength and adhesion. Called Dutch Brand No. 400, the banding material is claimed to be the only vinyl-backed strapping on the market. Among the advantages cited for the new tape are increased abrasion resistance, conformability, flexibility and moisture resistance. It is said to be especially suitable for materials that are usually stored outdoors. The tape has an average tensile strength of 275 p.i.w. and is reinforced with glass filaments. Additional data are available from the *Dutch Brand Div., Johns-Manville, 22 E. 40 St., New York 16.*

Film packager for liquids

The Model 601 Multipak, a new and automatic machine for packaging liquids in plastic-film pouches, is available from Key Packaging & Engineering. The unit is said to produce eight packages per stroke when using a 24 in. web (maximum). It will handle cellophane or any supported heat-sealable film and permits front and back registration. A variable-speed drive provides up to 100 strokes per minute. Production rate depends on the product being filled. Temperatures are separately controlled in each sealing bar. The sealing bars are also adjustable, permitting size changes without any change of parts. The liquid feeding pumps are stainless steel with removable Teflon gaskets, the supplier notes. *Key Packaging & Engineering, Bela Cynwyd, Pa.*

Automatic shrink-packaging machine

An automatic shrink-packaging machine designed primarily for supermarket operations is now available from Formatron. Known as Model 100, the unit is claimed to be capable of turning out up to 24 wrapped and sealed shrink-film packages per minute. All kinds of foods and non-foods can be accommodated without adjustments and the unit lends itself to multipacking and tie-ins of food and non-food items, the supplier claims. Problem items, such as lettuce, reportedly, can be packaged without trays. The unit is used in conjuction with a shrink tunnel and it may be coupled with automatic weighing and label-printing devices to receive completely finished packages. For more complete information and specifications, contact *Formatron, Inc., 3717 Filbert St., Philadelphia 4.*

Polyethylene bag-pressure tester

A new testing device that enables suppliers and users of polyethylene and similar flexible film bags to accurately determine internal package strength has been introduced by L F Engineering. The device consists of a rubber squeeze bulb, a length of flexible tubing with an injection-needle attached to one end and a calibrated gauge. To use, the needle is inserted into the sealed film package and the point of entry is sealed with a strip of pressure-sensitive tape to prevent air escape. The rubber bulb is squeezed, filling the package with air. When the bag or seal fails, a look at the gauge will show the pressure at which the failure occurred. *L F Engineering, Kenilworth, N. J.*

Shrink-film for frankfurter packaging

Goodyear introduced at the recent American Meat Institute a new shrink film designed for use in packaging frankfurters. Designated Vitafilm ST, the new wrap is said to possess non-fogging characteristics and high gloss as well as strength and heat-sealability. The film reportedly will not loosen or relax on the packages even after refrigerator storage. It has a yield of 21,500 sq. in. per pound and handles well on most wrapping machines, the supplier notes. For details on the shrink film, contact the supplier. *Goodyear Tire & Rubber Co., Akron 16, O.*

Stock patterned foil packages

Ekco-Alcoa now offers patterned-foil decorative designs for some of its most popular container sizes. The new patterns —a delicate flower design, a bold stripe pattern and an interesting gold acorn motif—are available on six of the firm's stock containers. The containers may be purchased in small quantities for inventory control. This also allows users to purchase a variety of sizes and still maintain reasonable inventories, the supplier notes. Transparent plastic covers come with four of the six sizes. Sizes available are 16- and 32-oz. oblongs with cover, a 2-lb. loaf with cover, an 8-in. round with cover and 1- and 2-lb. loaves without cover. Additional information is available from the supplier, *Ekco-Alcoa Containers, Inc., Wheeling. Ill.*

Disposable corrugated pallet

Hoerner boxes is now producing a new disposable corrugated - board pallet that is said to save bulk in shipment and withstand maximum compression. The pallet is shipped knocked down and is said to be easily assembled by the user. Component parts are a die-cut deck, a taped tube and a scored pad. It is cited as being able to withstand 18,000 lbs. compression. Return costs are also eliminated, the supplier notes. For additional details, contact *Hoerner Boxes, Inc., Keokuk, Iowa.*

Low-cost carton former

Waller Corp. is now marketing a new, low-cost machine which forms flat-folded, plastic-coated carton blanks into set-up and bottom-sealed cartons ready for filling of milk

Lifelike colors attract shoppers to goods packaged in gleaming LusterBoard

Colors reproduce better on the smooth, shining surface of LusterBoard. Notice how the delicate reds and yellows blend in an appealing portrait of autumn shades. Faithful reproduction is just one of the many features of LusterBoard that makes it a profitable packaging material to use. For example, LusterBoard folds perfectly when properly creased. Lift off the attached sample and test the folding qualities of LusterBoard yourself! LusterBoard embosses superbly, too. It comes in a wide range of thicknesses — from 14 to 22 point, and prints equally well by letterpress or offset. LusterBoard has a high degree of brightness, fast ink setting, and a gloss that stops a shopper. LusterBoard is the only folding boxboard to offer all these features. Find out how LusterBoard can help you sell more goods. Just write S. D. Warren Company, 89 Broad Street, Boston 1, Massachusetts. We'll be happy to send you all kinds of samples, demonstration pieces, prices, technical data and any other information you may require.

Warren's
HIGH STANDARD
Printing Papers

WARREN'S LusterBoard

"A better package pays for itself in extra sales"

or other dairy products. It is intended to help small dairies compete with the larger ones, the supplier notes. According to the company, other currently available forming machinery costs about 11 times as much. *Waller Corp., Crystal Lake, Ill.*

Quick bead test for aerosol cans

Testing Machines has developed a device to measure the bead on the upper locking cap of aerosol containers. The

gauge has a range of 1 to 1 1/16 in., with readings of 0.001 in. The dial has a low reading of 1.065 in. and a high reading of 1.075 in. If the reading is between these two points, the diameter is satisfactory. The graduated scale and dial are manufactured of compressed polyvinyl chloride and are said to be crush-proof and inert to the influences of oil and gasoline. The unbreakable glass, stainless steel plungers, crackle lacquer finish, pressure die-cast aluminum case and shock-protected watch mechanism on jewel bearings are all cited by the supplier as guaranteeing long life for the instrument. *Testing Machines, Inc., Mineola, N. Y.*

New development in polyurethane foam

A new process for the manufacture of polyurethane foam reportedly has been developed by Specialty Converters, Inc. The process consists of casting thin sections of the foam to a variety of non-porous substrates. The prepolymer, in liquid form, is fed through a mixing head onto a backing as it passes beneath a continuous belt. Calendering rolls are set to control the amount of prepolymer laid on the substrate, which then passes through an oven for foaming and curing. The foam can be faced on one or both sides and may also be reinforced with a variety of materials in a single pass through the machine, the supplier notes. The process is said to eliminate waste, extra handling and additional costs required to slit bun stock and laminate it to other materials. The foam is designated Tufcote-Foam and can be applied to paper, paperboard, aluminum foil, plastic film and plastic sheeting, the manufacturer notes. Reinforcing scrim, mesh or fibres may be imbedded in the center of the foam to increase tensile strength and afford tear and puncture resistance. The firm is establishing licensing agreements with companies interested in the new process. *Specialty Converters, Inc., East Braintree, Mass.*

Unit for underweight package rejection

Illumitronic Systems Corp. has developed a compact, automatic underweight rejector which detects packages with missing components or underfill. The new unit, identified as Model UWR-1, handles closed packages in a weight range up to 7 lbs, the supplier notes. It is said to accomplish 100% rejection of all units under a predetermined weight, within an accuracy tolerance determined by line speeds and product characteristics. As the packages move across the machine a flipper reject mechanism discharges underweight units from the carrier belt. Speeds of up to 300 packages per minute can be achieved, it is claimed. The unit measures 24 by 24 in. *Illumitronic Systems, Sunnyvale, Calif.*

New pouch-packaging facilities

Soy-U Co., maker of soy sauce and other condiments, has formed an affiliate for the contract packaging of liquids in polyethylene-cellophane laminated pouches. Known as Aqua-Pac, Inc., the affiliate is equipped to produce polyethylene-cellophane pouches in sizes from ½ to 24 oz. Production rates vary from 50 to 200 packages per minute. The firm has also installed equipment for tetrahedron-shaped packages. The new plant can package up to six different liquids simultaneously. Further details on the new contract-packaging facility are available from *Aqua-Pac, Inc., sub Soy-U Co., Westbury, L. I., N. Y.*

Electronic vinyl-printing process

An electronic process for applying printing or other markings to vinyl material has been developed by Electrocal. The new process is said to be an inexpensive method for applying multi-colored, intricate or detailed markings on vinyl. The method calls for printing the design on special transfer paper and then applying the sheet with a conventional radio-frequency sealing machine. The result is a permanently bonded, brilliant, scuff-proof marking which costs 10 to 55% less than regularly applied multi-color screening or foil decoration, the supplier claims. Further details are available from *Electrocal, Inc., Canton, Mass.*

Plastic dispenser closures

Three new plastic closures with double seals have been designed by Stull Engraving to provide improved sealing for dispenser bottles. They are made of Du Pont's Alathon 20 polyethylene, which was recently recognized as safe for food use by the F&DA. The caps reportedly may be fitted with a snap bead attachment to provide high-speed assembly, insured fit and to discourage tampering. The "jet-dispenser" closure features a dripless dispensing nozzle. The squirt dispenser closure has a break-off tip that makes scissor snipping unnecessary. The captive connected-spout jet dispenser features a spout-tip opening that can be varied in size and direction, the supplier notes. Controlled elasticity makes for a snug fit on all caps. For details, contact *Stull Engraving Co., Garfield, N. J.*

Automatic formed container packaging

Commercial machines for automatically packaging products in rigid plastic containers are now available from the Packaging Machinery Div. of Formed Container Corp., a Phillips Petroleum subsidiary. Designated Formline, the new machines are said to be compact and are of the horizontal type. Utilizing a continuous rotary process, they dispense, fill and seal containers of nearly all shapes and sizes—including square, rectangular, round, oval and compartmented, the supplier notes. Packaging speeds are said to range from 6 to 100 packages per minute on the standard models. Speeds of up to 600 packages per minute are reported to be achievable on the custom models. Tear-tapes for opening covers can be automatically applied if desired. The company also supplies high-density, rigid polyethylene containers. *Formed Container Corp., Orangeburg, N. Y.*

New 13-gal. polyethylene bottle

A light, virtually unbreakable and corrosion-resistant 13-gal. polyethylene bottle for industrial and consumer packaging of liquids is being offered by Industrial Can Co. The container is designed especially for storage and transportation of industrial liquids, particularly acids and other corrosive substances. U. S. Industrial Chemical Co.'s Microthene — a finely divided polyethylene with high stress-crack resistance — is used in the production of the bottles. Lighter in weight than glass containers, the new bottles are also said to require less storage space because of their semi-square shape. The supplier has received Interstate Commerce Commission certification for the 13-gal. container and plans to introduce them in larger sizes (25-, 30-, 40- and 55-gal. capacities) as well. Contact *Industrial Can Co., 145 Skillman St., Brooklyn.*

MIREX CIGAR CO. — Peoria, Illinois, packages PEORIA'S BEST Cigar Clippings in Thilco Print-Decorated POLY-KRAFT Bags to retain product moisture and freshness in storage and transit from factory to markets across the nation.

INTERSTATE NURSERIES — Hamburg, Iowa, packs strawberry plants in individual, Thilco heavy-duty, Print-Decorated POLY-KRAFT Bags for mailing. Plant roots breathe and live — are protected from rough handling and reach buyer in excellent condition.

JOHNSON & JOHNSON — New Brunswick, N. J., sell "Castaway", disposable razors for hospitals and other institutions in Thilco Print-Decorated POLY-KRAFT Bags. Heat-sealed bags also protect against corrosive elements in all climates.

LEAF BRANDS, INC. — Chicago, package Rain-No Ball Bubble Gum in POLY-KRAFT Carton Liner Bags to preserve freshness and flavor in transit and storage; prevent sticking, blocking and loss of sheen from m.v.t. penetration.

How Thilco POLY-KRAFT BAGS* unleash new sales forces in merchandising techniques

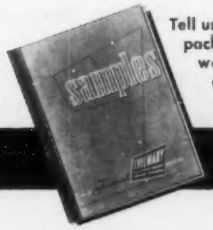
(*Including P_3K Poly-Kraft Bags)

...and keep products in the "Pink" of condition!

Problem Solver for Science & Research, too

Several of the country's leading university research centers use Thilco POLY-KRAFT bags for seed germination and pollination experiments. In this instance seed corn germination is recorded on bags at various stages of growth. Numerous other laboratory uses are found for these popular Thilco bags.

Thilco's versatile, economical POLY-KRAFT Bags provide one of the highest degrees in product protection. They resist m.v.t., grease and oil penetration — are inert to most acids and alkalies and the poly coating is odorless, tasteless and non-toxic. When furnished outer-coated with Pasteable-Printable-Poly (P_3), eye-appealing surface printing on the poly coating can be achieved by Offset, Letterpress or Silk Screen — bag sealing with "every day" water base adhesives (as well as heat sealing). P_3K also has a lustrous sheen and protects from soiling in handling. Whichever your choice of finish, Thilco POLY-KRAFT Bags provide an economical, low cost packaging medium — *hard to surpass* for so many marketable products. We invite your inquiry.



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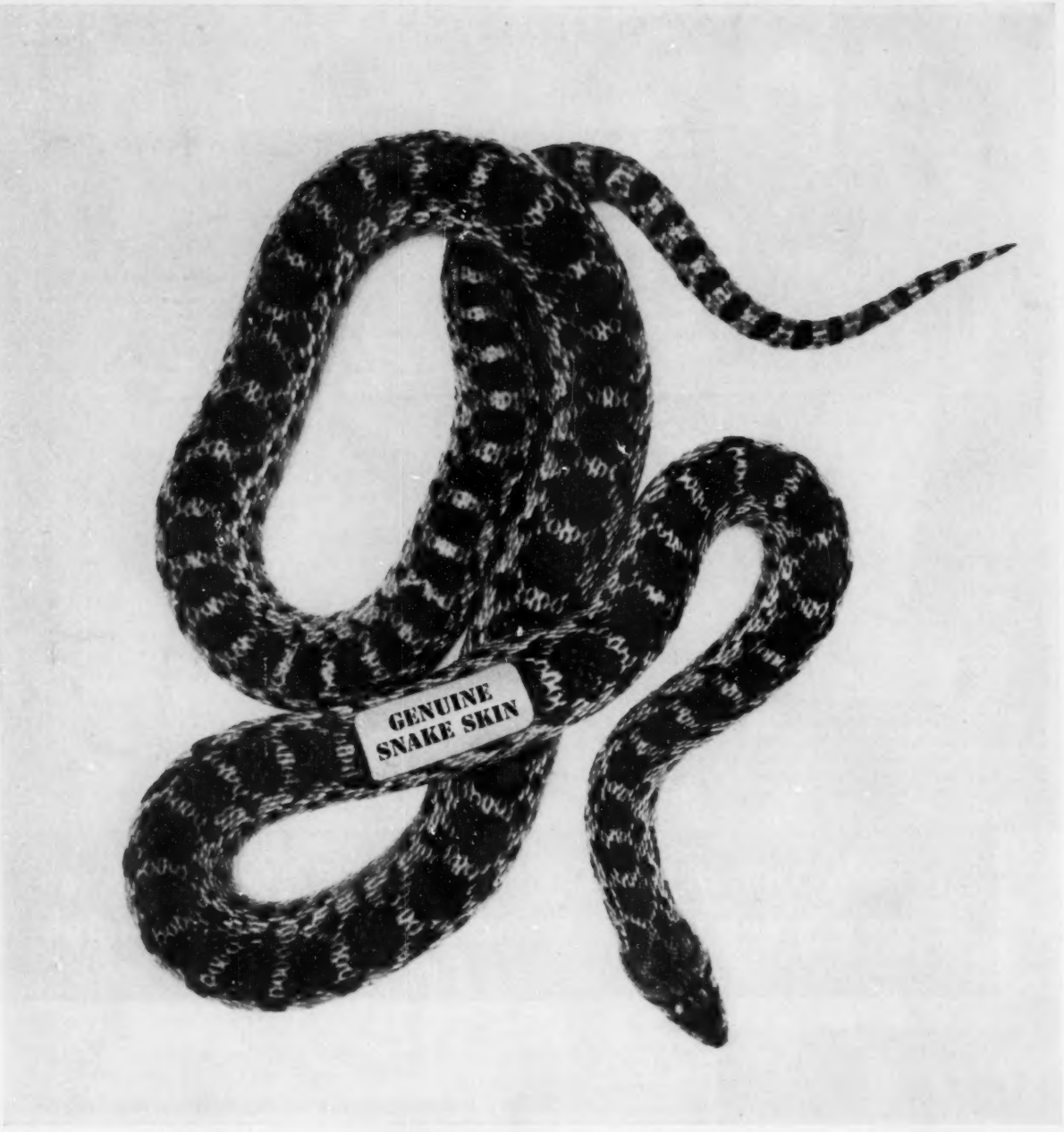

HOW TO LABEL A SNAKE

1. Grasp snake firmly behind head.
2. Peel pressure-sensitive Fab label from backing paper.
3. Press fabric label in place – it sticks with a touch.
4. Release snake and suggest he do the same with you.

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Hard-bitten manufacturers of carpeting, luggage, rough castings, things in pliofilm bags, footwear, rainwear, otherwear, and all sorts of hard-to-label products, are stampeding to Avery Fab labels. As they do, they make the discovery that Fab cuts their labeling costs – as with all pressure-sensitive products, Fab is easier to handle; faster to apply. If you put labels on curved, flexible, or rough-textured surfaces, you'll get along fine with Fab. If you put a label on *anything*, you'll get along fine with Avery . . . the most respected name in pressure-sensitive products.

For more information on Fab and other Avery pressure-sensitive products, phone your nearby Avery office or write direct to 1616 S. California Street, Monrovia, California.

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WHETHER your business is cosmetics, or some other fine item, Lord Baltimore can create an attractive carton that reflects the quality of your product.

The tasteful, feminine appearance of this Avon carton was achieved through Lord Baltimore's embossing process. And precise embossing is just one example of the scope of our packaging service.

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Safest seal in film... Scotchpak®

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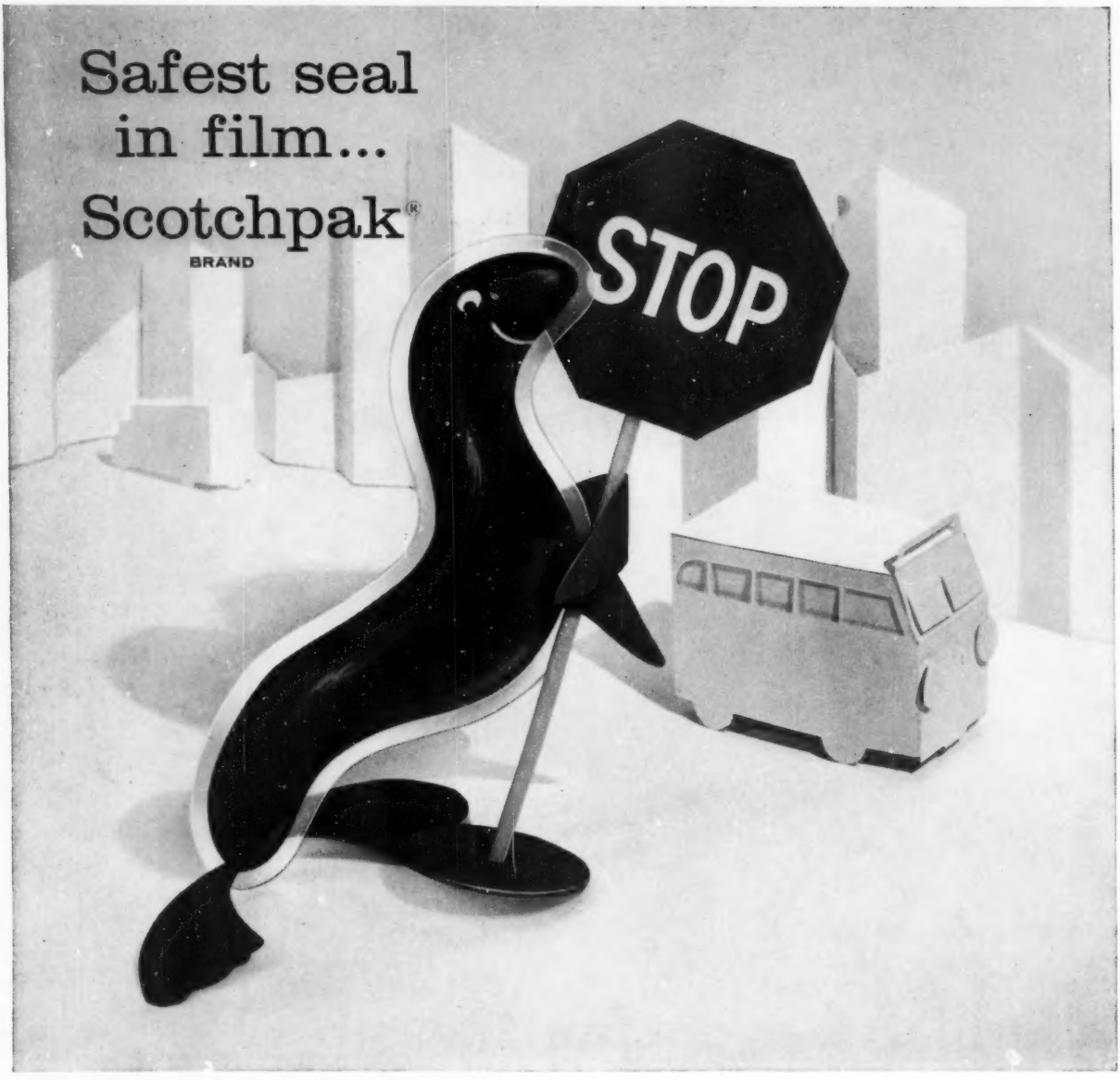
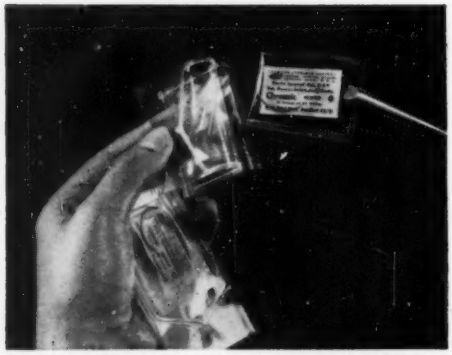


If you've been frustrated by film seals that fail, try "SCOTCHPAK" —used by American Cyanamid for safer, more efficient packaging of their new Surgilope SP®* sterile suture packs.



The dependable seal of "SCOTCHPAK" gives a "go" signal to packagers who have been stopped by film problems. "SCOTCHPAK" is made differently than any other film on the market. It's specially tailored by 3M with the strictest quality-control supervision. It heat-seals easily at 300° to 400° F., 20-60 psi pressure, making a seam that is as strong and impermeable as the film itself. "SCOTCHPAK" stays strong and pliable, too, at temperatures from −70° F. to 240° F. *If you don't feel safe with other films you've tried, it's time you learned about* "SCOTCHPAK." We will be happy to send you samples and work with your packaging people. Write or call Film Products Group, 3M Company, 900 Bush Avenue, St. Paul 6, Minn. Dept. ICA-101.

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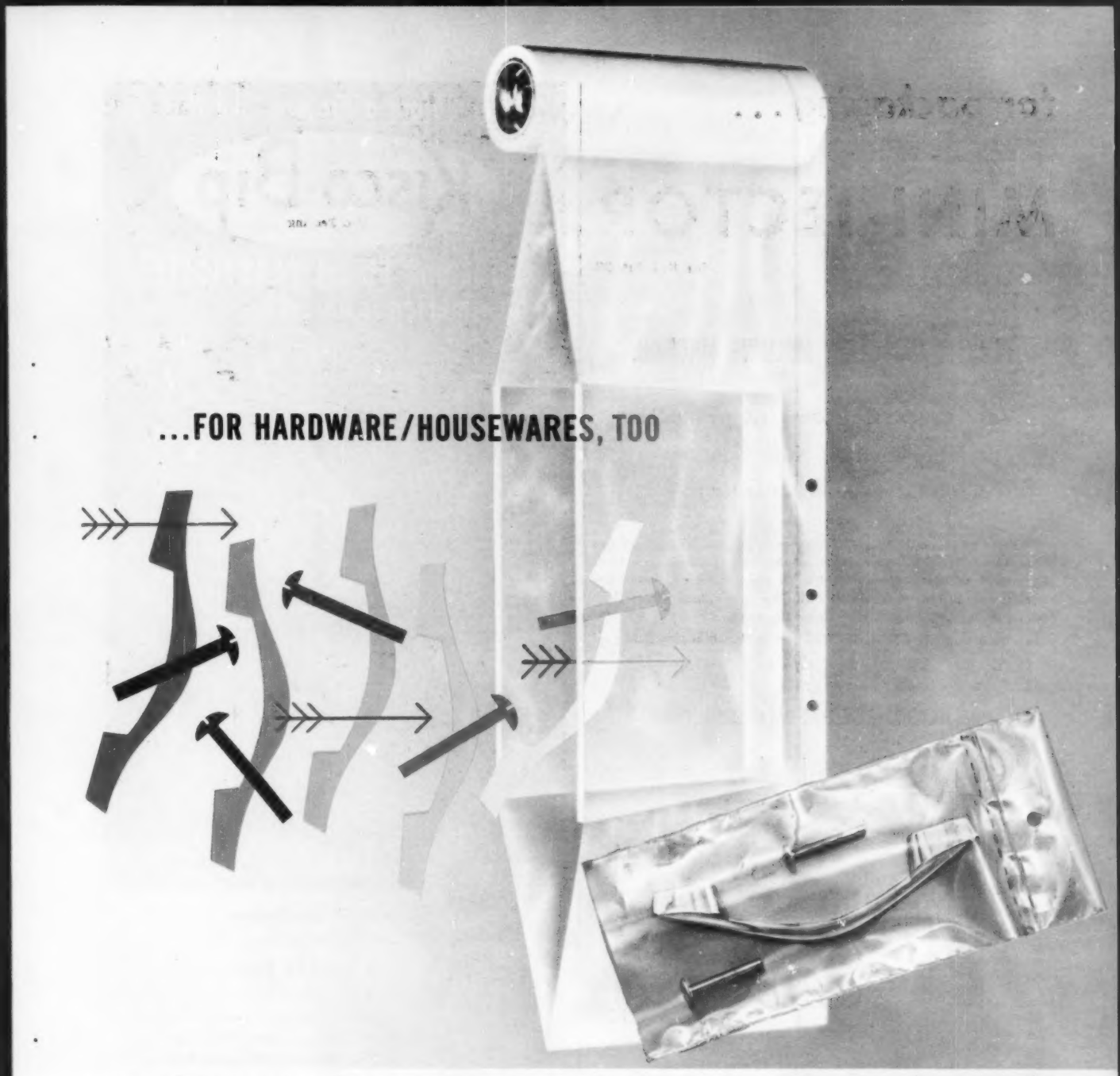

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A NEW LOW-COST AUTOMATED POLYETHYLENE PACKAGING SYSTEM

FUNCTION: Completely packages products in polyethylene film—in one operation—in your plant. Produces inexpensive, loose or shrink-fit polyethylene packages around regular, odd-shaped or out-sized products of all types. **ADVANTAGES:** Uses polyethylene roll stock. Saves up to 50% in material costs over ready-made bags and other packaging methods and materials. ■ Boosts in-plant packaging efficiency, produces up to 30 packages per minute at reduced labor costs. ■ Provides a self-selling plain or printed package that protects, displays and glamourizes. **COST:** Complete MA Systems normally range from $2000 to $4000. **A CASE IN POINT:** National Lock Company uses MA Systems with four-side sealer and rack package attachments to package its line of cabinet hardware in clear, hang-up polyethylene packages – replacing self-sealer kraft envelopes printed with contents lists. **RESULTS:** Transparent rack package has boosted sales by showing product, and opened up hardware chain market. Material costs cut 51%, labor costs per-1000-packages reduced considerably—and only half the floor space needed for packaging operation. **FREE OFFER:** Let the MA System test-package your product in durable, transparent polyethylene. Send us a sample, or write for complete details on this revolutionary packaging system to either Kordite Company, Macedon, New York or Mehl Manufacturing Company, 2057 Reading Road, Cincinnati 2, Ohio.

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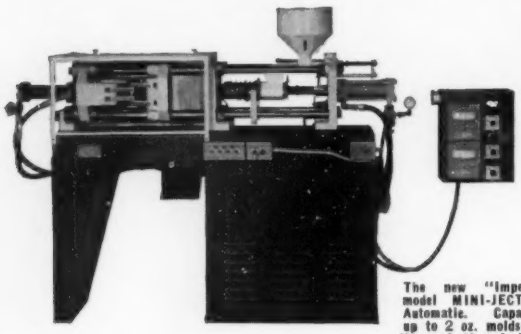
PLASTIC INJECTION MOLDING MACHINE

"Very successful low-cost production of Nalgene test tube closures,"
reports Nalge Co., Inc., Rochester, N. Y.

"We are using our MINI-JECTOR to make closures for Nalgene test tubes. These are friction-fit closures, made of polypropylene, in a triple cavity mold. Of course other similar items could be tooled. Almost any material can be run in the MINI-JECTOR—conventional polyethylene linear polyethylene, nylon, etc."—Nalge Co., Inc.

So says one satisfied MINI-JECTOR user in the packaging field.

MINI-JECTORS IDEAL FOR PACKAGING ITEMS



The new "Imperial model MINI-JECTOR. Automatic. Capacity up to 2 oz. molds all thermoplastics, including nylon.

An unlimited variety of plastic parts can be molded successfully with versatile MINI-JECTOR plastic injection molding machines. Four basic types of MINI-JECTORS are available. Capacities range from sub-miniature to 2 oz. Models start from under $1,000. to $6,470.

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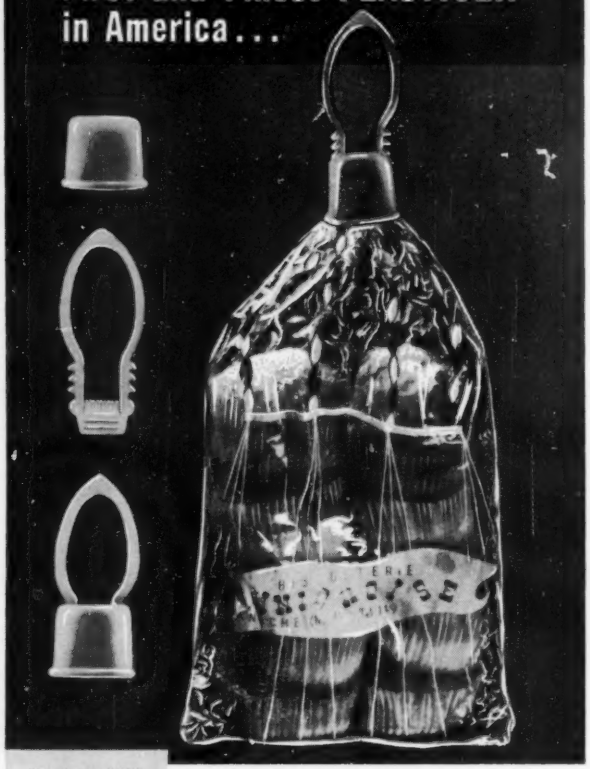

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It's here—newest, most exciting advance in today's packaging — the KISCO-BIP PLASTICLIP. . . . Tremendously successful on the Continent, this patented clip is now earning great acceptance as an American-made product. A foolproof, sanitary, easily-attached closure for polyethylene bags, it offers airtight protection against humidity, leakage, odors, mildew, hardening, temperature changes, decomposition. Made in a variety of colors, in three sizes to fit all types of bags. KISCO-BIP is used both for original closure—or included in packages for all resealing purposes.

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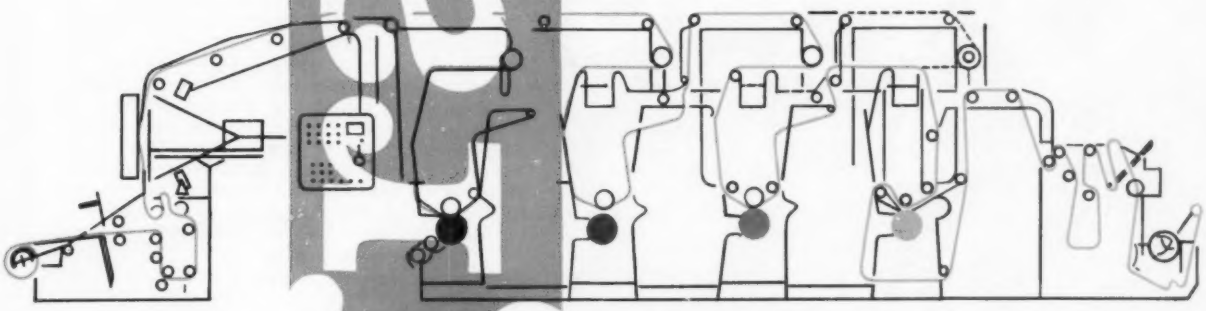

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FOR YOUR INFORMATION

The College of Business Administration and the College of Pharmacy of **St. John's University**, Jamaica, N. Y., in cooperation with the **Packaging Institute**, will hold a seminar on packaging. The seminar, which will begin Wed. evening, Oct. 25, at 7:00 p.m. and consist of six 2-hr. sessions held at the same time on consecutive Wednesdays, is offered as a community and professional service. It is under the joint chairmanship of **Thomas Chambers** of the College of Business Administration, **Dr. John J. Sciarra** of the College of Pharmacy and **James Field** of the Packaging Institute.

The **American Management Assn.** has issued a new 1961-62 edition of "AMA Management Bookshelf," the annual catalogue of all books, periodicals and films produced by the AMA. It has been distributed to AMA members, but is also available without charge to any interested executive writing on his business stationery to AMA, 1515 Broadway, New York 36.

The AMA will hold an orientation seminar entitled "Plastic Containers for Packaging" Oct. 4-6 at the association headquarters in the Hotel Astor. The seminar will feature 20 speakers and will explore new developments and techniques in rigid and semi-rigid containers in this country and abroad.

More than 50 foreign marketing people, representing 25 countries, enrolled in the International Marketing Institute of Harvard Business School, attended the Second International Packaging Forum sponsored by Inpak Systems, Inc., which identifies itself as "the first international packaging agency." Speakers were **Peter B. Baker**, Arthur D. Little Co., who presented management s role in packaging; **William Murphy**, J. Walter Thompson Co., the merchandising viewpoint; **Enid Edson**, design aspects; **Walter M. Ronayne** and **Ira B. Wheeler, Jr.**, Celanese Corp. of America, the supplier's viewpoint, and **Charles A. Southwick, Jr.**, technical editor of MODERN PACKAGING, a forecast of tomorrow's packaging.

R. T. Flaherty of the Film Products Group of Minnesota Mining & Mfg. Co. has been appointed chairman of the Packaging Standards Committee of the **Modern Foods Council**. The council has been recently formed to promote the boil-in-bag packaging concept.

A new bulletin, "Packaging Line Conveyors," is now available from **U. S. Bottlers Machinery Co.**, Chicago. The brochure describes the various link-chain type conveyors supplied by the company. Copies of the bulletin are available to packaging executives without charge on request to the company at 4015 N. Rockwell St., Chicago 18.

The 10th Annual Aerosol Package Contest will be held in conjunction with the 48th annual meeting of the **Chemical Specialties Mfrs. Assn.** in the Roosevelt Hotel, New York, Dec. 4-6. Awards will be on the basis of package design only and there will be 15 categories. Foreign entries will be judged in their own category and then collectively to determine the best foreign entry. Entries are open to any aerosol brand owner or marketer and not restricted to members of CSMA. There are no entry fees or other charges. Deadline for entries is Oct. 15. For entry blanks and a set of rules write to CSMA, 50 E. 41 St., New York 17.

William P. Dunham has left General Foods Corp. after 14 years of marketing experience to become pres. of the **Premium Advertising Assn. of America. Gordon C. Bowen**, formerly pres., will continue as board chairman.

Among 15 industrial designs selected to reflect a cross section of American life at an exhibit sponsored by the **International Council of Societies of Industrial Designers** in Venice, Italy, were packages for the following products: Kimberly-Clark Business Papers, designed by **Morton Goldsholl**; Burgess Cellulose Co.'s Marine Boat Bailer Sponge and other household sponges, designed by **Dave Chapman** and **Hal Hester**; Johnson & Johnson's Micrin Oral Antiseptic in apothecary bottle, designed by **Donald Deskey Associates**.

Events

Oct 1-4—**Produce Packaging Assn.**, annual convention and exposition, Chase-Park Plaza Hotels, St. Louis.

Oct. 2-6—**Annual National Hardware Show**, McCormick Place, Chicago.

Oct. 5-8—**American Society of Industrial Designers**, 17th annual national meeting, St. Catherine Hotel, Santa Catalina Island, Calif.

Oct. 9-11—**TAPPI**, 16th plastics-paper conference, French Lick Sheraton, French Lick, Indiana

Oct. 18-20—**Packaging Institute**, 23rd annual National Packaging Forum, Biltmore Hotel, New York.

Oct. 28-Nov. 1—**National Automatic Merchandising Assn.**, 75th anniversary convention and first international symposium on automatic vending, McCormick Place, Chicago.

Oct. 31-Nov. 2—**Packaging Assn. of Canada**, 10th Canadian National Packaging Exposition, Automotive Bldg., Exhibition Park, Toronto.

Nov. 7-9—**Point-of-Purchase Advtg. Institute**, 15th annual symposium and exhibit, McCormick Place, Chicago.

Nov. 7-10—**Packaging Machinery Mfrs., Institute**, 4th biennial show and 1st forum, Cobo Hall, Detroit.

Nov. 13-14—**Society of Packaging & Handling Engineers**, 7th annual Eastern show and 1961 natioal SPHE competition, Fifth Regt. Armory Hall, Baltimore.

Anwyll

James Anwyll, Jr., industrial sales mgr. of the Marvellum Co., Holyoke, Mass., has been elected pres. of the **Volatile Inhibitor Mfrs. Assn.** Volatile inhibitors are chemical compounds which give off an invisible anti-corrosion vapor that prevents oxygen in moisture from combining with steel to form rust. The inhibitors are usually combined with paper to provide a wrap that eliminates the need for grease coating of ferrous metal products. **E. L. Orchard**, Orchard Paper Co., was elected v.p.

A manual designed for those who operate polyethylene-film extrusion machines, particularly workers new in the field, has been published by **U. S. Industrial Chemicals Co.**, a div. of **National Distillers & Chemical Corp.** The 56-page manual is illustrated with diagrams and charts, and is said to be the first of its kind to be published by a raw-materials supplier. The manual is also reported to be designed for those responsible for the maintenance of polyethylene film extruders and for those in charge of supervising the operation of such machines. The volume explains the operation of extruders, describes what happens to the resin on its way through the extruder, helps to define the problems operators and maintenance men often have to cope with and suggests possible solutions. It winds up with a list of 50 do's and don'ts. Copies are available through U.S.I. salesmen and branch offices.

The *Packaging Directory, 1961*, published by **Tudor Press Ltd.**, London, E.C.4., is now available. The directory —81 pages larger than previous editions —has 305 pages of text and is subdivided into seven main sections. The volume contains a buyers' directory (which includes cross sections on containers and closures, materials, packaging machinery and equipment, and services), a list of organizations, associations and consultants, a trade-names directory, a list of forthcoming exhibitions, and an index. It is published in conjunction with *Packaging*, a monthly trade publication and is priced at $2.94.

A 216-page catalog describing its entire line of web-fed printing and converting equipment is now obtainable from the **Champlain Co.** Among the equipment described—with detailed

HiYield™ PRINTKOTE

makes cartons look clean

The all-white, sanitary look of cartons for famous Bayer Aspirin provides a clean, sparkling appearance that enhances consumer appeal.

Manufactured from HiYield Printkote bleached board, these cartons are pure white inside, outside, and all the way through, insuring a quality image.

HiYield Printkote is made only from 100% virgin fibre. It contains more square feet per ton than higher density boards and therefore yields *more cartons* per ton. That's why cartons manufactured from HiYield Printkote bleached board are comparable in cost to many packages made from much lower printing grades of non-virgin fibre boards.

Here is a new, economical bleached board that will add customer appeal where printability is a requirement but cost is a major consideration.

See for yourself how HiYield Printkote can give your packaging *more selling power*. Write Bleached Board Division, West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

West Virginia Pulp and Paper

EXACT MICROMETERS
for calipering thicknesses of packaging materials from 1/1000th to 10/-000ths of an inch

Cady 10/1000ths Micrometer gives direct reading on thicknesses to 10/1000ths of an inch. Dial is glass covered; capacity is 50000ths of an inch.

New portable Cady Micrometer has 2½ inch throat designed for exact thickness measurement in the plant or on the road. Graduations: 1/1000ths of an inch or hundredths of a millimeter. Capacity is one-half inch. Direct reading glassed dial.

Vernier converts thousandths to ten-thousandths. Designed for those requiring dead weight anvil action, vernier scale is attached to indicator blade and registers with thousandths graduations on dial. All Cady Micrometers meet ASTM and TAPPI standards.

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River Forest, Illinois

F.Y.I. [*Continued*]

specifications—are unwind stands, printing units, rewinds, fabricating equipment, web processing equipment and electronic controls used primarily by packagers. For a copy of this catalogue write on company letterhead directly to Champlain Co., Roseland, N. J.

The **Goodyear Tire & Rubber Co.**, Akron, has released a brochure on its new 75 PW Vitafilm for produce wrapping. The brochure, which is illustrated, describes the film's qualities and suggests its various uses. Representative mechanical wrapping aids—for in-store use—are also illustrated.

Lithographers & Printers National Assn. is sponsoring a fall workshop meeting Nov. 27-29 at the Edgewater Beach Hotel, Chicago. It is intended as a means of exploring some of the major problems faced by the industry.

At the recent annual general meeting of **The Institute of Packaging**, held at the Connaught Rooms, London, England, **The Rt. Hon. Lord Cornwallis of Linton, K.B.E., M.C.** was installed as pres. He succeeds **The Rt. Hon. Lord Luke of Pavenham T.D., D.L.** who retired after a four-year term. **Alan Fraser Much**, I.C.I. Ltd., was elected national chairman for the coming year, succeeding **C. C. Hazelwood. F. J. Briggs, Jr.**, Tickopres Ltd., was elected national vice chairman.

A nation-wide survey conducted by the **Home Makers Guild of America** for **Owens-Illinois Glass Co.** shows that people prefer to buy soft drinks in no-deposit, no-return bottles. In response to the direct question, "In which type of container would you prefer to purchase soft drinks?" 45.7% said they wanted no-deposit bottles while 11% voted for cans, according to the survey. The complete survey results are available in booklet form.

Lent & Overkamp Publishing Co., Paterson, N. J., has published a third edition of "Crowns—The Complete Story" by **John J. Nurnberg.** The 355-page book is illustrated throughout with photographs and diagrams, and covers all phases of crown forming, cork disks, lithographing, lacquering and varnishing, packing, shipping, storage and quality control. The new edition also discusses aluminum, short-skirt and plastic-lined crowns. It costs $10.

DRUPA, the 1962 international printing and paper fair, will be held May 5-18 in Dusseldorf, W. Germany. In order to insure that visitors will be able to survey all of the exhibits at the show, the promoters have arranged to group exhibits according to the nature of the products involved. This was felt to be necessary in view of the projected size of the fair, the sponsors report.

Among the many speakers at the 16th Midwest Conference of the **American Society for Quality Control**, Oct. 19-20, will be **Otto F. Hunziker**, mgr. for quality control, Central Metal Div., Continental Can Co. His topic will be "Vendor-Vendee Relations." The meeting will be held at the Hotel Chase-Park Plaza in St. Louis. The ASQC is a national organization which encourages the development of statistical techniques to improve quality control.

Robert C. Vereen, Liberty Distributors, Philadelphia, has been elected chairman of the **Packaging Institute's** Hardware & Housewares Packaging Committee. The action took place at the quarterly meeting held in New York, Aug. 25. At the meeting **N. Allan Pettit**, retiring chairman, announced that PI had approved the committee's new name. It was formerly called the Hardware Packaging Committee. Mr. Vereen had been vice chairman of the committee. **E. L. Barringer**, formerly secy., becomes vice chairman and **P. Jay Harris** becomes secy. The committee's next quarterly meeting will be held Oct. 4 at McCormick Place, Chicago, during the National Hardware Show.

The **Packaging Assn. of Canada** has opened an office to service the Quebec Chapter. The office is located in the Industrial Arts Bldg., 4467 St. Catherine St., W., Westmount 6, P.Q.

Frederick G. Lodes of Lodes Aerosol Consultants, Inc., New York, will be the official representative of the **Chemical Specialties Mfrs. Assn.** at the International Congress of the **Federation of European Aerosols.** The congress will be held in Lucerne, Switzerland, Oct. 4-7. The CSMA recently formed a European Aerosol Liaison Committee of which Mr. Lodes is chairman.

A trade list of importers, wholesalers, distributors and sales agents of containers in the Republic of Panama has been compiled for the **U. S. Dept. of Commerce** by American Foreign Service Officers abroad under the direction of the Secretary of State. Included in the document are economic data on selective containers with respect to manufacture and use in Panama. Copies may be purchased from the Bureau of Foreign Commerce, U. S. Dept. of Commerce, Washington 25, C. C., or from any of the 33 Commerce Dept. Field Offices at $1 per copy.

The point-of-purchase impact of aerosol packages available in Canada will be judged at the first annual Canadian Aerosol Package Contest. Sponsored by the **Canadian Mfrs. of Chemical Specialties**, the awards will be presented at the association's convention, Royal York Hotel, Toronto, Oct. 30-Nov. 1. The contest is open to any aerosol product available in Canada as of Sept. 1.

R. Dean Shippy has been appointed as packaging specialist on the staff of the food-distribution section of the Dept. of Agriculture Economics at the University of Delaware. Mr. Shippy will be concentrating on produce-packaging studies carried out in cooperation with the **Produce Packaging Assn.**, which recently awarded the university a special grant making possible a full-time position in this field.

MASTERPIECES IN METAL CONTAINERS

Chinese Bronze Incense Burner of Han Dynasty—courtesy of The Art Institute of Chicago

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Two-piece drawn aluminum cans with compound-sealed ends are excellent containers for many chemical specialty, food, or drug products requiring hermetic sealing. These cans are economical, lightweight and rustproof. They can be coated inside or out. They stack easily for compact storage . . . are available in 18 sizes. Write for information on this latest product of Clark research and development.

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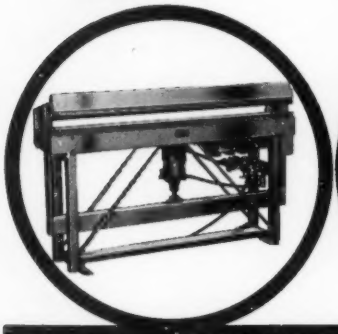

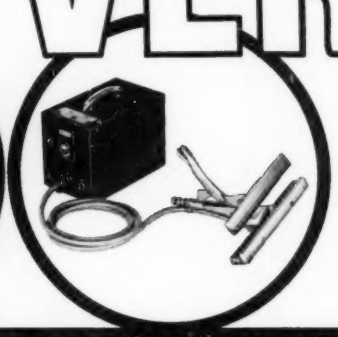

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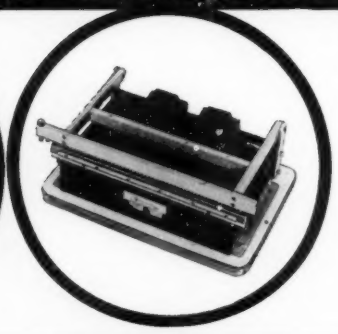

Vertrod Thermal Impulse Sealers are manufactured under one or more of the following U. S. patents: 2,460,460; 2,479,375; 2,509,439; 2,574,094; 2,630,396; 2,633,433; 2,640,796; 2,640,798; 2,650,183; 2,675,054; 2,682,294. Canadian Patents 468,140 and 496,237. Other Patents Pending.

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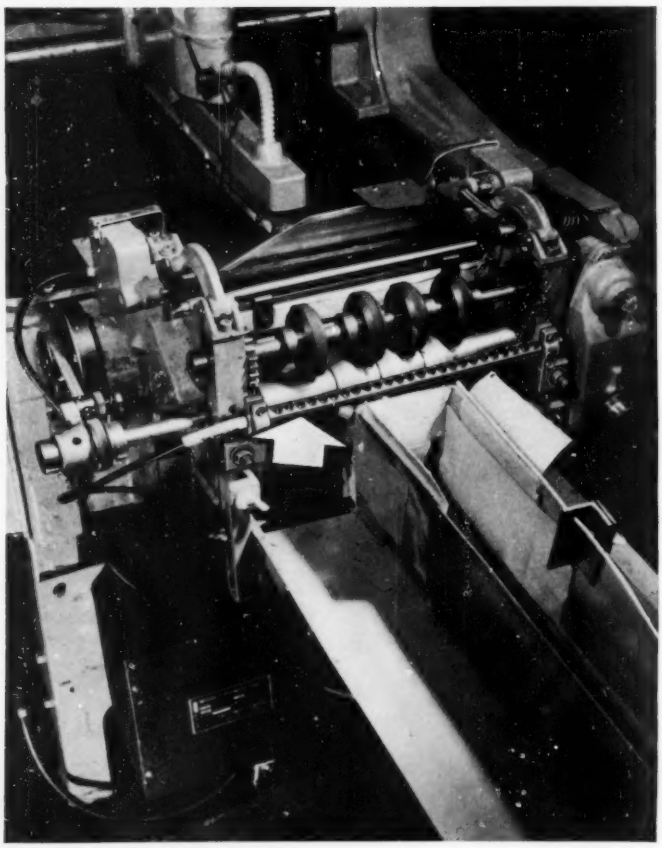

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Leading Packagers know—

Rowell excels* in Premium quality Boxes --without added Premium Cost!

***ex·cel** (ĕk sĕl'), v. **1.** to surpass, be superior to; outdo.—v. i. **2.** to surpass others, or transcend in some specific respect. —**Syn. 1** e.g. as **Rowell** *is noted for excellence in the manufacture of set-up boxes of fine construction, having close tolerances.* For giving careful attention to detail for special requirements to achieve *appropriateness* (an important concept in today's merchandising) to dramatize, to bring out the individuality of your product. To provide the look and feel of quality, assure maximum shelf appeal, to protect delicate and precisely fashioned articles as no lesser box can.

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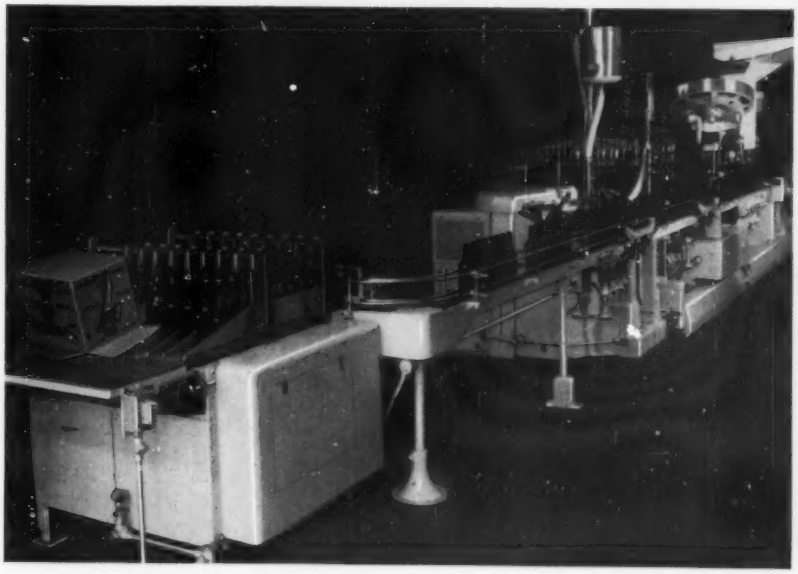
Synchronized bottling line now installed at Lawrenceburg plant of Jos. E. Seagram & Sons, Inc.



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U.S. PATENTS DIGEST

This digest includes each month a brief summary of the more important current patents which are of special interest to all packagers.* Edited by H. A. Levey.

Mechanism for Pairing Containers Having Gabled top Enclosed Pouring Spout, Joseph F. Glynn (to Ex-Cell-O Corp., Detroit, Mich., a corporation of Michigan). U.S. 2,990,934, July 4. In a mechanism for receiving paperboard containers, of the type having a gable topped closure with an upstanding rib surmounting the closure and an extensible-pouring spout enclosed within one half portion of the gable top and rib and a staple fastener extending through the other half portion of the rib.

Produce Container, Homer W. Forrer (to The Mead Corp., Dayton, Ohio, a corporation of Ohio). U.S. 2,990,947, July 4. A paperboard produce container comprising a generally rectangular bottom section, front, back, and end walls foldably joined to the front, back, and end edges of said bottom section.

Sterile Package, Eli A. Zackheim (to Johnson & Johnson, a corporation of New Jersey). U.S. 2,990,948, July 4. A package, the contents of which are sterile, comprising a substantially rigid molded fiber pulp container, the fibers from which said container is formed being randomly dispersed.

Dispenser Box, Samuel Alexander, 126 Palm St., Hartford, Conn. U.S. 2,990,950, July 4. In a tissue dispensing box adapted to be removably fastened to a supporting surface, said box being constructed from an integrally formed blank of cardboard-like sheet material and including side panels, end panels, a rear panel and a front panel, a tissue dispensing opening in one panel.

Paperboard Containers and Method of Erecting and Simultaneously Loading Same, Clifford D. Fallert (to Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,990,951, July 4. In a pallet mounted package for the transportation of two or more relatively long tubes, rods and other uniform cylindrical articles of substantially the same length, the combination of a strap bound pallet mounted container with individual top, bottom and end forming members and individual side forming members, which are each substantially longer than the said packaged articles.

Dispensing Container Closure, Erich Gronemeyer (to Container Corporation of America, Chicago, Ill., a corporation of Delaware). U.S. 2,990,980, July 4. A dispensing closure for a container, comprising a closure body having a first dispensing package therethrough, said passage having a seat therein, a closure element movable and sealingly mounted in said seat, the closure element having a second dispensing passage.

End Loading Easy Opening Carton, Nicholas D. Ellis (to Anheuser-Busch, Inc., St. Louis, Mo., a corporation of Missouri). U.S. 2,990,992, July 4. A collapsible one-piece substantially rectangularly shaped elongated carton for holding a plurality of cans or the like in a vertical position, and having at least one end thereof open for filling the carton, in which the cans are loaded into the carton simultaneously laterally only through said open end.

Packaged Carton, Kenneth T. Buttery (to KVP Sutherland Paper Company, a corporation of Delaware). U.S. 2,990,993, July 4. A carton comprising a rear wall having a top closure member at its upper end, side walls having rearwardly inclined front edge portions at their upper ends provided with closure flaps, the front edges of the lower portions of said side walls being inwardly offset relative to the upper portions thereof.

Carton Construction, Carl F. Wessel (to Packgaing Corp. of America, a corporation of Delaware). U.S. 2,990,995, July 4. A carton construction comprising a bottom section, side wall sections foldably connected to, extending upwardly from and substantially normal to said bottom section; end wall sections extending upwardly from and substantially normal to said bottom section; said side and end wall sections cooperating with one another to delimit an open top.

Paperboard Carrier, Arthur J. Weiss (to Continental Can Co., Inc., New York, N.Y., a corporation of New York). U.S. 2,990,997, July 4. A wraparound carrier having overlapping closure panels, one of the panels having a latching extension disposed beyond a transverse pivot line located within the overlap of the closure.

Container Structure, Earle H. Barclay (to Dairypak Butler, Inc., Cleveland, Ohio, a corporation of Ohio). U.S. 2,990,998, July 4. A container comprising a shaped body portion and a removable cover portion, said body portion being formed of a substantially rigid, self-sustaining material substantially impervious to fluids.

One Piece Multi-Trip Rectangular Container, Walter C. George and Russell B. Thimmig, Jr. (to Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,990,999, July 4. In a rectangular shipping container with half covers hinged to the side walls and downwardly folded flanges on the sides and outer ends of the covers.

Reinforced Glass Aerosol Containers, William S. Glover and Joseph F. West, (to Wheaton Glass Co., Millville, N.J., a corporation of New Jersey). U.S. 2,991,896, July 11. A container adapted to contain a product under pressure to be dispensed in aerosol form comprising a frangible bottle having a discharge opening, said bottle having lines and areas on the exterior surface of normal substantial continuity.

Box Liner, John C. Fischer and James B. Andrews (to St. Regis Paper Co., New York, N.Y., a corporation of New York). U.S. 2,991,898, July 11. An article of manufacture comprising a one-piece resilient liner for insertion against the bottom and side walls of low-height wooden shipping boxes of the type used in transporting grapes and other fruit and wherein the liner serves as a cushion between the fruit and the box while providing for the free access thereto of circulating air as well as means closing the gap along the upper lateral corners of the box thereby preventing pilferage of the grapes.

Light Weight Double-Walled Container, Richard M. Poorman (to Union Carbide Corp., New York, N.Y., a corporation of New York). U.S. 2,991,900, July 11. A double-walled insulated storage container for fluids comprising an inner vessel, a surrounding shell, an insulating inter-space therebetween, and fluid conduit means communicating with the inner vessel.

Dispensing Carton, Merrill J. Coe (to KVP Sutherland Paper Company, Kalamazoo, Mich., a corporation of Delaware). U.S. 2,991,910, July 11. A collapsible dispensing container for nestable receptacles formed of an integral cut and scored blank and comprising side walls hingedly connected to permit collapsing of the container.

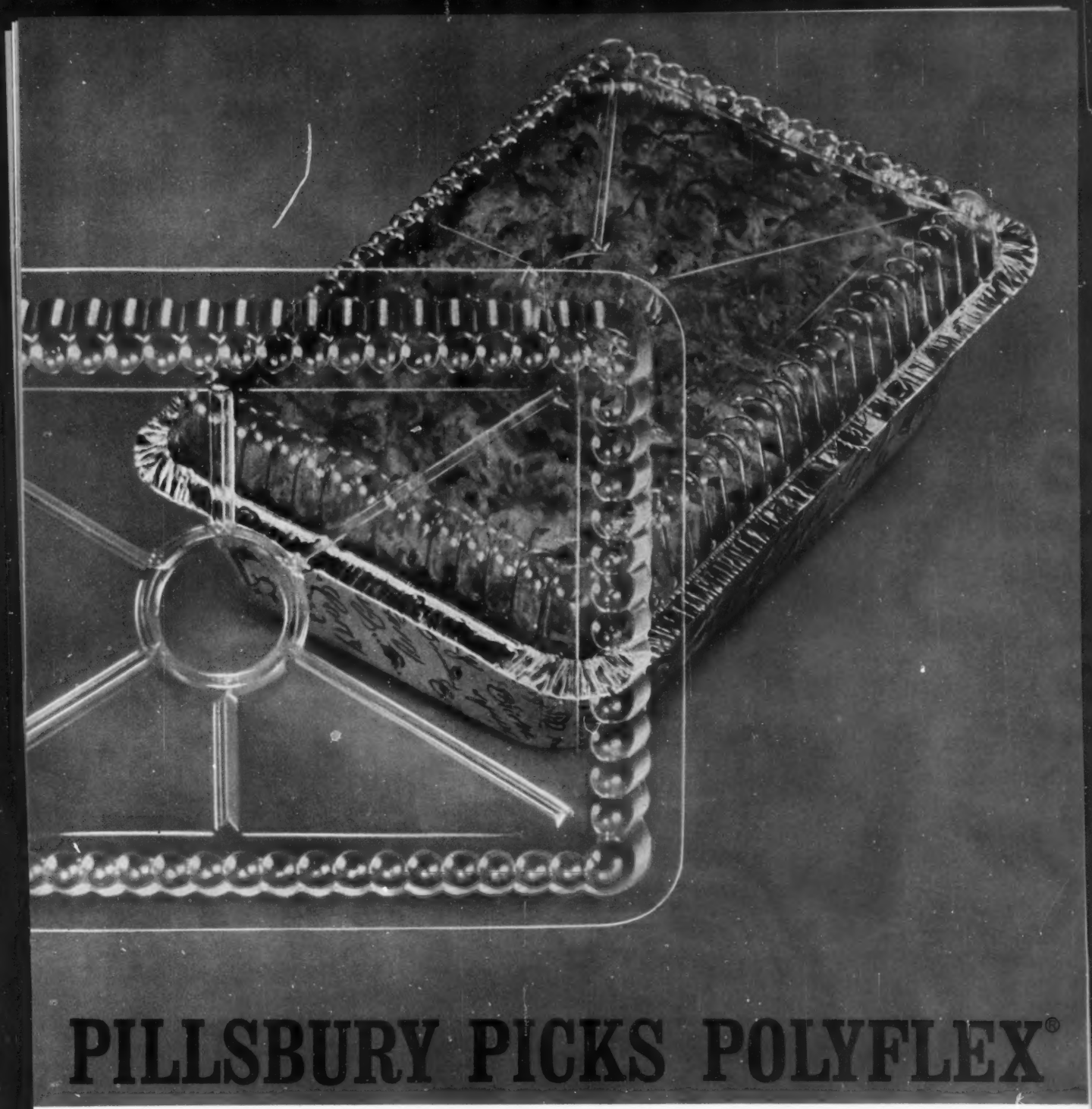
Combined Pouring and Sealing Devices for Containers, Imre Goth, 39 Holland Park Road, London W. 14, England. U.S. 2,991,913, July 11. A drip proof device for dispensing liquid from a pouring outlet of a container selectively by pouring or by drops, respectively; said device comprising an annular dispensing member having a flexible wall portion force fitting the container outlet for securing the device to the outlet in liquid dispensing positional relationship.

Food Package, Shy Rosen and Walter S. Thompson (to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware). U.S. 2,992,117, July 11. A food package comprising, a flexible wrapper sheet having a transparent portion of uncoated, inherently thermoplastic material and a marginal portion provided with a heat-sealable coating adapted to be activated at a lower temperature than the base sheet.

Liquid Container with Built-in Drinking Straw, Gordon Daline, Christmas Lake, Excelsior, Minn., U.S. 2,992,118, July 11. A liquid container with a built-in drinking straw comprising, a sealed liquid-confining container having side walls made from flexible thin sheet material and a closed top and bottom, an elongated member defining a hollow conduit and anchored to the inside of said side wall and having the lower end thereof disposed in close association to the container bottom.

Method and Apparatus for Removing Blown Plastic Containers Leon E. Elphee (to Owens-Illinois Glass Co., Toledo, Ohio, a corporation of Ohio).

***For more detailed information, copies of patents are available from the U. S. Patent Office, Washington 25, D. C., at 25 cents each, payable in currency, money order or certified check. Postage stamps are not acceptable.**



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Patents [*Continued*]

U.S. 2,992,454, July 18. A take-out device for removing a formed article from a forming machine in which the article is retained by an integral portion, comprising a displaceable carriage having spaced side members.

Apparatus for Continuously Forming Tubular Containers, Marion M. Cunningham (to United States Rubber Company, New York, N.Y., a corporation of New Jersey). U.S. 2,992,674, July 18. Apparatus for forming a continuous collapsible tube from flexible vulcanizable material comprising an expandable core plate around which the tube may be formed and means to guide the flexible vulcanizable material in folded overlapping relationship around said core plate.

Packaging Machine, Robert A. Havemann and Larry N. Brown (to St. Regis Paper Company, New York, N.Y., a corporation of New York). U.S. 2,993,314, July 25. In apparatus of the class described the combination comprising: a roll separator device including a plurality of tubes mounted upon mounting means for holding same substantially parallel and in selected spaced positions about a common axis, such mounting means being angularly shiftable to move such tubes angularly simultaneously.

Apparatus for Handling Cases, Ernest A. Verrinder and Erle J. McGrath (to Food Machinery and Chemical Corp., San Jose, Calif., a corporation of Delaware). U.S. 2,933,315, July 25. Apparatus for handling cases or the like comprising a conveyor having a flat, horizontal conveying surface movable in predetermined direction, means for supporting a plurality of parallel lines of stacks of cases on a surface close to said conveying surface and at a level substantially the same as the level of said conveying surface and with each line of stacks being substantially parallel to the direction of movement of said conveying surface.

Case Packing Machine, Charles E. Kerr (to Food Machinery and Chemical Corp., San Jose, Calif., a corporation of Delaware). U.S. 2,993,316, July 25. A machine for packing articles into a case comprising a collecting platform for receiving articles advancing along a path, said collecting platform having a plurality of parallel grooves formed in the upper surface thereof and extending in the general direction of said path, a generally semicylindrical guide bar for each of said grooves.

Box-Wrapping System, Donald W. Shelmire (to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware). U.S. 2,993,420, July 25. In a box-wrapping system, including a box-wrapping machine having a shaft rotatable in each cycle of the system, a cam carried by said shaft, a transfer mechanism operated by said cam to transfer box and wrapper assemblies from a transfer station to said wrapping machine, a suction conveyor for delivering the box and wrapper assemblies to the transfer station.

Die for Forming Carton Blanks, Harry L. Phillips and Lytton S. Fain (to Floseal Corp., Oakland, Calif., a corporation of Delaware). U.S. 2,993,421, July 25. A die for forming a carton blank from a sheet of cardboard com-

Whatever your product, there may be an opportunity for better packaging, better protection or better display available now—with existing rigid foil containers or specially-engineered packaging from Anaconda Aluminum.

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The top 15 U.S. food chains are customers of Standard Packaging

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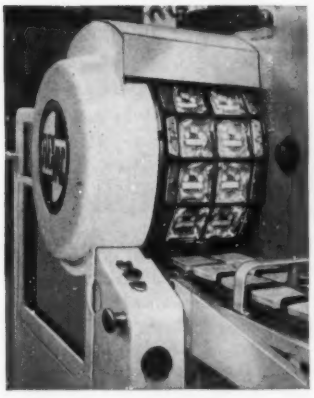
Packaging toy blocks poses "many-sided" problem

Build a better building block, and gift-buying Grandmas will beat a path to your door. Especially if they can *see* why your blocks are better. Standard's *Bradley-Gilbert Division* solved the problem for Kusan, Inc. They built a better building blocks *box*. Cellophane windows on four sides give lots of visibility. And a cleverly die-cut inner core fully displays *each* of the 18 blocks. Increased sales prove that Grannies, Doting Aunts and Proud Parents have been beating paths to the toy counters ever since.



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FILM AND FOIL PACKAGING • FOLDING AND SET-UP BOXES
• CLOSURES AND CAP LINERS • PAPER PAILS, CANS, TRAYS
• LABELS AND OVERWRAPS • LAMINATIONS

Patents [*Continued*]

prising a plurality of cutting and creasing rules disposed along lines defining the outline of the blank to be cut from said sheet and the creases to be formed in said blank, along which said blank is to be folded to form a carton, said rules having coplanar base edges extending longitudinally thereof for direct engagement with the flat planar bed of a die-cutting press.

Carton Filler, Bert R. Van Slyck and Hugh M. Brownlee (to Food Machinery and Chemical Corp., San Jose, Calif., a corporation of Delaware). U.S. 2,993,517, July 25. A carton filling machine comprising a rotary turret, a conveyor mounted adjacent the turret, means on the conveyor movable in a straight line path and operative while moving in said straight line to propel a carton past the turret, means defining a measuring cup on the turret in position to follow a circular orbit as the turret turns.

Package with Article-Holding Insert Suspended in an Open-Faced Paperboard Frame, Orison W. Stone and Donald P. Doran (to Continental Can Company, Inc., New York, N.Y., a corporation of New York). U.S. 2,993,587, July 25. A packaging device comprising a rectangular paperboard band having four flat outer walls with upper and lower edges defining spaced, substantially parallel planes, a separate flap extending from each edge of each of said walls at fold lines defining the edges of said walls.

Surgical Package, Howard F. Zoller and John L. Neumeyer (to Ethicon, Inc., a corporation of New Jersey). U.S., 2,993,589, July 25. A hermetically sealed tearable surgical supply envelope which comprises a top sheet and a bottom sheet super-imposed one upon the other in edge-to-edge relationship, each of said sheets comprising an outer layer of aluminum foil and an inner thermoplastic layer.

Bubble Package, William R. Denton (to The W. E. Bassett Company, Derby, Conn., a corporation of Connecticut). U.S. 2, 993,590, July 25. In combination, two substantially flat panels in back-to-back adjacency, one of said panels having an opening therein continuously surrounded by the remainder of said one panel, a flanged bubble package having an open sided bubble conforming generally to said opening and mounted with the flange between said panels and with the bubble portion extending through said opening and located thereby.

Article Carrier, Francis V. Kulig (to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York). U.S. 2,993,618, July 25. A blank for fabricating an open ended tubular carton which is adapted to enclose, when erected, a plurality of cylindrical articles arranged in row forming relation and in longitudinal and transverse alignment.

Article Carrier, Edwin L. Arneson (to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York). U.S. 2,993,635, July 25. A blank for wrapping around a plurality of cylindrical articles which are arranged in row formation and in longitudinal and transverse alignment so as to enclose the same.

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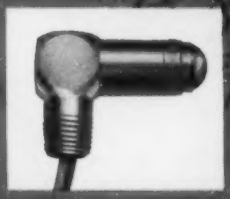

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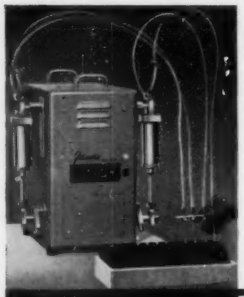

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PMMI show

Packaging production men looking for the latest word in equipment and how to keep it running will turn to Detroit's new Cobo Hall next month (Nov. 7-10) for the Packaging Machinery Manufacturers Institute Show of 1961.

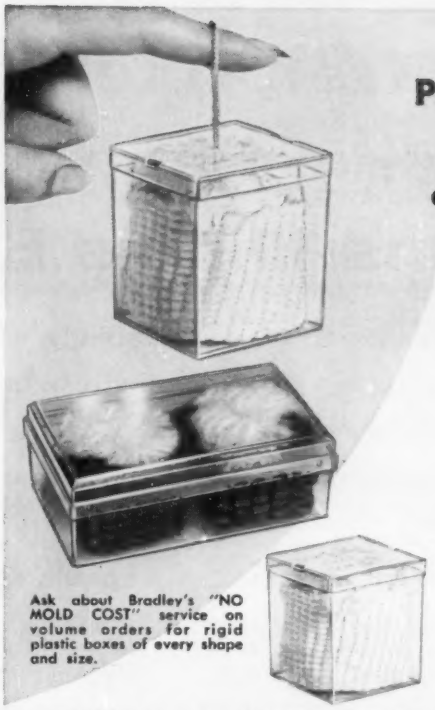
For the first time, machinery men will have their own concurrent conference-workshop, scheduled for half-day sessions on Nov. 8 and 9, pinpointing up-to-date procedures for maintaining packaging equipment. This conference will feature a system of roving discussion leaders, who will travel among groups of conferees instead of the usual seminar practice, in which the listeners switch conference rooms.

With attendance by packaging production men expected to top 20,000, suppliers are planning a no-nonsense show with working exhibits of virtually every type of packaging machine from unscramblers to case sealers. Emphasis will be on automatic operation by means of newly simplified mechanical, electrical and pneumatic systems—but there is expected to be plenty of lower cost semi-automatic equipment for the smaller operator. There will also be important exhibits of adhesives, plastics, foils and a wide variety of other packaging materials.

Exhibitors presently total 220 and will spread their wares over more than 100,000 sq. ft. of booth space on a single floor of the impressive new riverfront exhibition hall. Thus, the coming show will have 65 more exhibitors and 37,000 sq. ft. more space than the last PMMI Show in New York in 1959.

Attendees will have a total of 28 hrs. in which to roam the exhibits. The show opens at 10 a.m. on all four days and closes at 6 p.m. the first three days, 2 p.m. on the final afternoon. As in the past, a $2 entrance fee will be charged to limit attendance to those interested in packaging. The admission fee also will entitle the visitor to attend the conference-workshop sessions, being run under the theme "Planned Maintenance: the Profit Tool of Modern Management."

Chairman of the 1961 PMMI Show Committee is W. W. Anthony, executive vice president of Crompton & Knowles Packaging Corp. The show is being managed by Hanson & Shea, Inc., Pittsburgh. ●



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add sales "SOCK" to Wigwam Mills Slipper-Socks

Dramatic display? Glamour? Eye appeal? Wigwam Mills, Sheboygan, Wis. gets them — from all 6 sides — with these re-use sparkling plastic boxes that provide counter-top "showrooms" for their whole line of women's and children knitted footwear.

Bradley's new patented friction-fit cover (with or without colorful carry cords) stays-on regardless of contents weight. Available in clear, colors or 2 tone rigid polystyrene these dangling display 'n sell boxes catch customer's eyes, "catch rides home on her fingers". Let's discuss how they can put added "sock" into your sales too!

Ask about Bradley's "NO MOLD COST" service on volume orders for rigid plastic boxes of every shape and size.

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Expanda-Kraft offers "strongest, toughest shipping protection" says Owens-Illinois Executive

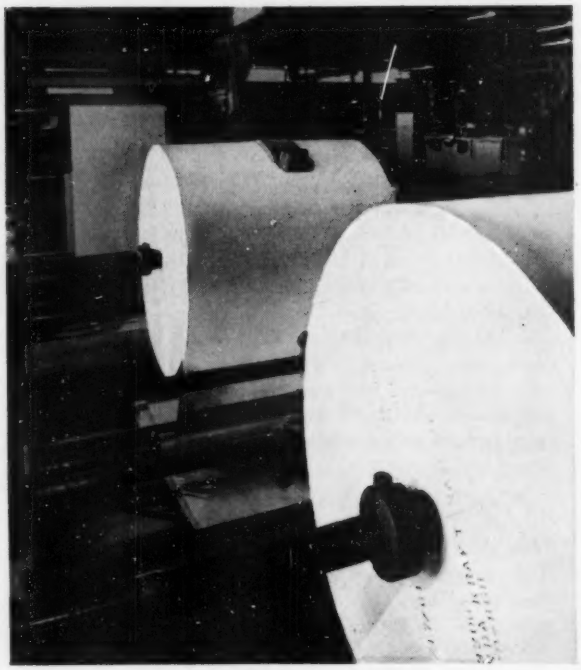
"We can recommend Expanda-Kraft unhesitatingly whenever a customer asks for strong, tough, maximum shipping protection that can be provided for his product—no matter whether it be alfalfa or yeast, asphalt or zinc sulphate, or anything in between," says P. L. Chism, Plant Manager, Owens-Illinois' Multiwall Bag Division, Valdosta, Ga.

"In heavier bag weights, the Expanda-Kraft paper actually saves the customer money by reducing the total basis weight required, while furnishing more strength than can be available with comparable weights of standard flat kraft.

"Expanda-Kraft produces a sharp and clear printed image because of its low absorbency. Not only do we score an impressive bonus in appearance, thanks to Expanda-Kraft, but it also helps us cut down on ink and glue costs because of this lower absorbency," Mr. Chism reports.

"Our customers particularly appreciate the porosity of Expanda-Kraft paper, for it facilitates the escape of air during filling, a vital factor in maintaining efficient filling rates with valve-type bags. Ordinarily, this kind of porosity might connote high absorbency, but such is not the case with Expanda-Kraft."

Find out what Expanda-Kraft® can do to improve your package. *The H&W Division of Scott does not make bags.* But we do make Expanda-Kraft paper in basis weights of 40 to 100 lbs. and in colors of Natural, Shell White and a clean, bright White. For information and samples, write Hollingsworth & Whitney Division, Scott Paper Company, 230 Park Avenue, New York 17, N. Y. or 111 West Washington Street, Chicago 2, Ill.



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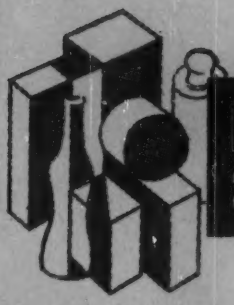

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EXPANDABLE POLYSTYRENE. 4-page brochure describes an expandable polystyrene adaptable to a wide range of packaging applications especially electronic devices, pharmaceuticals, cameras and other items. Describes properties and gives other data. Keppers Co., Inc. **(150-J)**

POLYETHYLENE CONTAINERS. 4-page brochure describes molded one piece polyethylene containers in five gallon to fifteen gallon capacities. Describes a variety of closures and spouts and gives a list of suggested uses. Delaware Barrel and Drum Co. **(151-J)**

GLUE GUN SYSTEM. 6-page folder illustrates and describes a line of fully automatic glue guns and accessories. Includes specifications and other data. John P. Fox Co., Inc. **(152-J)**

CARTONS AND TRAYS MACHINERY. 8-page booklet and data sheet describes a carton and tray forming and gluing machine for fabricating heavy duty cartons. Illustrates special features and gives specifications. Peters Machinery Co. **(153-J)**

STIFFNESS TESTER. 6-page brochure illustrates and gives description of a stiffness tester which evaluates both the stiffness and resilient qualities of materials. Includes specifications, accessories and prices. Taber Instrument Corp. **(154-J)**

CUTTING AND CREASING PRESS. 4-page data bulletin illustrates and describes in detail an automatic die-cutting and creasing press which handles solid fibre as well as all types of corrugated board. Includes diagrams and specifications. S & S Corrugated Paper Machinery Co., Inc. **(155-J)**

PACKAGING FILM. 10-page booklet describes and illustrates application of a plastic packaging film, especially suited for produce and other items packaged at store or counter levels. Illustrates wrapping method. Goodyear Tire and Rubber Co. **(156-J)**

DWELL DRIVE. 4-page brochure describes a dwell drive. Features continuous input and intermittent motion output. Gives diagrams of operations and other technical data. Remmele Engineering Inc. **(157-J)**

FREEZE DRYING EQUIPMENT. 4-page folder describes a line of freeze drying equipment for laboratory research, pilot plant and light production. Included are accessory equipment, full specifications of each model and other data. American Sterilizer Co. **(158-J)**

CUTTING MACHINE. 6-page fold-out brochure describes an electronic-hydraulic cutting machine for a variety of products including asbestos, canvas webbing, cardboard, cork and plastic sheeting. Includes diagrams, accessories and examples of application, plus specifications. The United Shoe Machinery Corp. **(159-J)**

FEEDING UNITS. 36-page catalog describes a line of electric heating units with components and other equipment. Includes cartridge, tubular, strip, ring and immersion types. Includes diagrams, specifications and prices. Vulcan Electric Company. **(160-J)**

ULTRA-VIOLET ABSORBERS. 12-page bulletin describes and gives uses of a line of ultra-violet absorbers in clear coatings. Includes formulations, specifications, product data and list of supplies. Antara Chemicals, Div. of General Aniline and Film Corp. **(161-J)**

PRINTING PAPER PLANNER. Comprehensive guide-wheel paper selector indicates stocks and weights best suited to particular printing jobs; literature, catalogues, etc., with grade selector for letterpress, offset, gravure, etc. Champion Paper & Fibre Co. **(162-J)**

PLASTIC PACKAGES. Illustrated 8-page catalog of plastic packages manufactured from stock molds, many having features of interchangeable inserts for the covers. Gives size, material, covers, colors. Manufacturer also equipped to meet specifications for special packages. E. B. Kingman Co. **(163-J)**

BALL REBOUND TESTER & GAS TRANSMISSION CELL. Two data sheets illustrate and fully describe (1) ball rebound tester consisting of a 1.5 inch inside diameter vertical clear plastic tube into which a 5/8 inch diameter steel ball is released by a magnet, and (2) Dow gas transmission cell designed for use in determining the gas transmission rates of plastic sheeting and plastic coated papers. Custom Scientific Instruments, Inc. **(164-J)**

PROTECTIVE PACKAGING. Data sheet describes a resilient, durable product cushion, available in any thickness and density, molded to fit product shape. Lists typical applications. Janesville Cotton Mills. **(165-J)**

COMPACT STATIC CONTROLS. Data sheet illustrates and describes patented static control that guarantees static elimination. Features balanced electronic design and positive controlled current at all speeds. The Takk Corp. **(166-J)**

CASE BOTTLE PACKER. 4-page brochure describes and gives important information about a bottom-loading case packer for bottled goods. Machine lifts bottles into case, reduces damage, increases speed of operation. Climax Products Div., Lodge-Shipley Co. **(167-J)**

PLASTIC PACKAGING EQUIPMENT. Reference file gives important information about plastic sealers, wrapping units and heat shrink tunnel, in addition to accessories. Specifications. Clamco Div., Cleveland-Detroit Corp. **(168-J)**

ROTAMATIC PACKER. Data file describes in detail an open-mouthed packer that is fully automatic and designed for accurately weighing and packing free flowing materials. Contains diagrams, operating and installation specifications. Raymond Bag Corp. **(169-J)**

BLISTER PACKAGING. Bulletin illustrates enhancing qualities of clear plastic blister and skin packaging. Hopple Plastics, Inc. **(170-J)**

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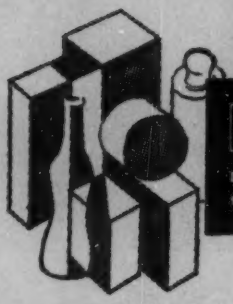

MANUFACTURERS' LITERATURE

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BLISTER SEALING EQUIPMENT. Data sheets illustrate and describe manual or fully automatic blister sealing machine with turntable and conveyor. Seals in less than one second to cardboard plastic or coated materials. Thermo-Dielectric Machine Co., Inc. **(171-J)**

CANS AND TUBES. 4-page brochure illustrates and gives important information on a wide variety of packaging and mailing fibre cans and tubes. Describes selection of closures and interior and exterior linings. Cin-Made Corp. **(172-J)**

LITHOGRAPHIC PRESSES. 6-page brochure gives data and description of operational advantages of a 43 in. x 60 in. folding carton lithographic press. Controls own design. Assures stability during function of feeding and registering, inking and delivery. Harris-Seybold Co. **(173-J)**

HEAT SEAL PAPERS. Extensive data file gives important information on types of heat-seal coatings available for use by hand or automatic machine devices. Includes an application and specific purpose chart. The Brown-Bridge Mills Inc. **(174-J)**

CORRUGATED CONTAINERS. 32-page book describes and illustrates a variety of corrugated containers. Discusses typical applications for each style. Olin Packaging Division. **(175-J)**

SEMI-SOLIDS FILLER. 4-page brochure illustrates and gives important information about four models for the filling of semi-solids, such as jams, jellies and soft soap. Features include fully automatic operation, special accessories for specific product packing. F. L. Burt Co. **(176-J)**

BOX AND PARTITIONS. Folder describes a variety of boxes and partitions including metal stay boxes and their components. The Cincinnati Box and Partition Co. **(177-J)**

VERSATILE AUTOMATION TOOL. 8-page booklet describes a number of basic devices capable of directly replacing hand labor. Performs virtually any repetitive task, associated with hand and arm motion. Describes typical applications and accessories. U. S. I. Robodyne Div. of U.S. Industries Inc. **(178-J)**

LIQUID FILLING. Data sheets describe rotary liquid filling machine which introduces a number of new features, including continuous all-around conveyor. Packer Machinery Corp. **(179-J)**

WATER-REPELLENT SACKS. Data file describes and gives samples of water-repellent Kraft paper sack material. Light in weight but gives heavy-duty all-purpose performance. Olin Packaging Division. **(180-J)**

MOLDED CAPS. 4-page brochure describes a line of molded caps which feature a liner retaining ledge which holds liner permanently captive. Anchor Hocking Glass Corp. **(181-J)**

CARTONS. 10-page booklet describes in detail a carton service designed to provide cartons with exact uniform construction to suit a specific application. Includes discussion of design, research, and development. Olin Packaging Division. **(182-J)**

PAPERBOARD CONTAINERS. 30-page brochure covering the manufacturing opportunities in Georgia. Also contains a summary of the southeastern markets, special food board products and new paperboard products. Supplementary tables, charts and maps. The Georgia Department of Commerce. **(183-J)**

TAGS AND LABELS. A complete spiral-bound catalog illustrates and describes tags and pressure sensitive labels. Catalog is indexed and in full color, gives data and accessories. Labels available in a variety of stocks and colors, free design service and quotations. The National Tag Co. **(184-J)**

SHIPPING. 16-page illustrated catalog describes complete line of shipping container mounting systems that offer engineered protection against shipping and handling damage. For shipping business machines, cameras, jet engines, recorders, etc. Lord Mfg. Co. **(185-J)**

AUTOMATIC PACKAGING. Illustrated bulletin describes specially tailored, one piece corrugated container having triple ply bottom, two ply walls, and gusseted two ply re-closable top. Mead Container Div. Mead Corp. **(186-J)**

SEALS AND TAGS. Illustrated folder describes five ways in which seals and tags help to sell your product. Suggested sizes and shapes, general descriptions, other data. Stoffel Seals Corp. **(187-J)**

FLUTED PARTITIONS. 12-page booklet that describes a system of fluted partitioning, for safe handling, conveying, shipping and displaying small, delicate products and components requiring partitioned separation. Rondo of America. **(188-J)**

KRAFT PAPERS. 16-page folder describes a kraft paper that is processed to be stretched up to 15% without breaking or tearing. Illustrations describe how it is made and the various uses it can be adopted for. Clupak, Inc. **(189-J)**

PLASTIC BAGS. 2-page booklet contains sample and description of plastic bags with tuck-in flap and welded metal grommet. Designed to protect shipping tags, job tickets, etc. from damage. Tower Packaging Co. **(190-J)**

FILLING EQUIPMENT. Fold-out brochure describes auger filling equipment to handle a range of products from nutmeg and celery seed to face powder and putty. Automatic and semi-automatic equipment covered in detail. Food Machinery And Chemical Corp. **(191-J)**

PACKAGE CASER. 8-page brochure describes a package caser that is available in 13 different models. Basic standard models and their components illustrated. Food Machinery And Chemical Corp. **(192-J)**

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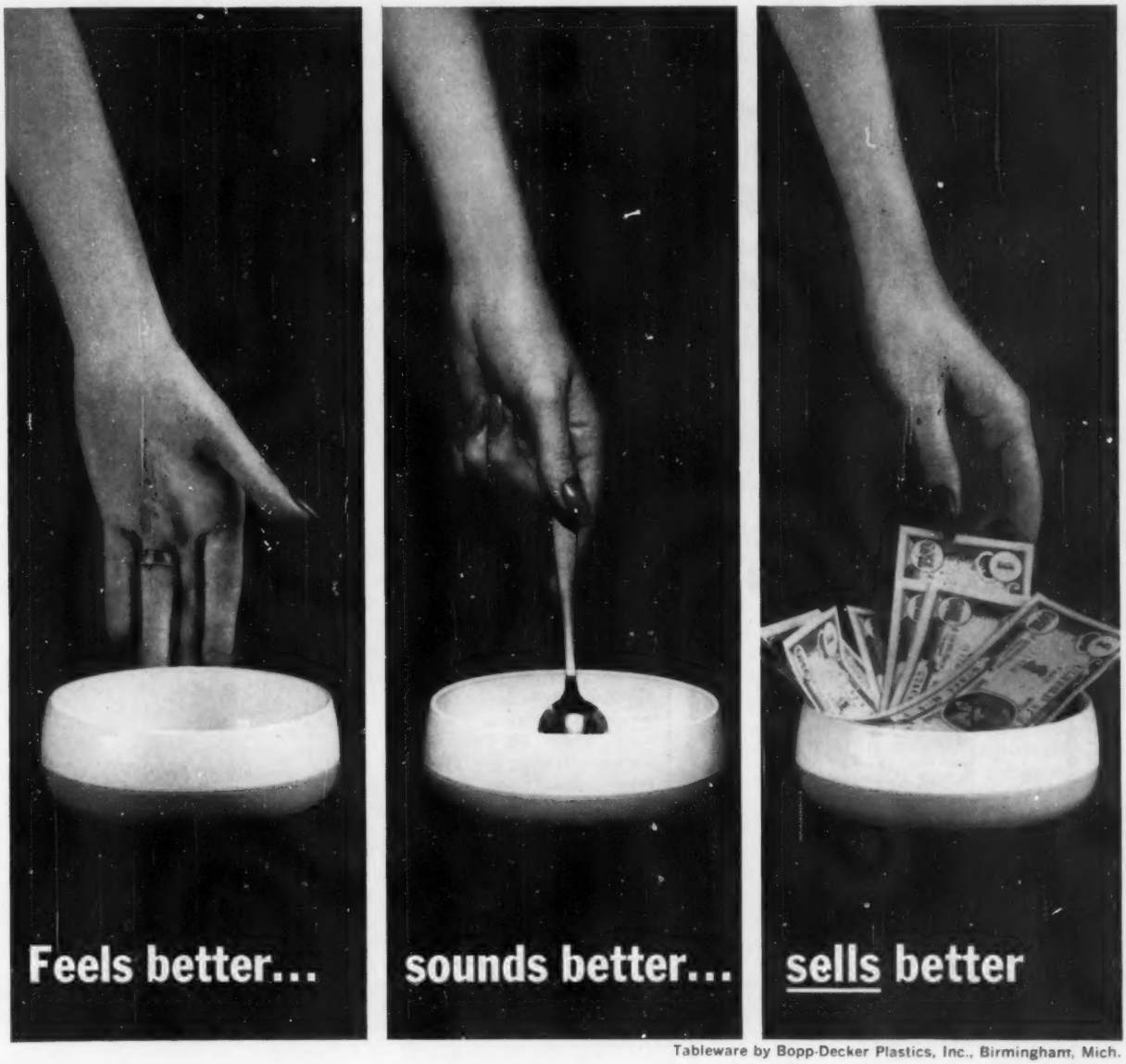

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New plan for the Institute Forum

[*Continued from page 123*]

tories Division, American Cyanamid Co.

9:30 Paperboard—GEORGE T. JOYCE, *assistant director, Product Development Dept., St. Regis Paper Co., seminar chairman.*

Base Natural Component Paperboards for Packaging—HENRY VRANIAN, *vice president, Chesapeake Corp. of Virginia.*

Bleached and Machine-Coated Component Paperboards for Packaging—DR. KEITH W. MAX, *director, research and development, Containerboard & Kraft Paper Div., Continental Can Co.*

Specialty Laminated-Paperboard Structures—HOWARD L. HEISE, *vice president and director of research, The Gummed Products Co.*

Printing Processes for Paperboard—RALPH M. AUDRIETH, *head, silk-screen process, Printing Ink Div., Interchemical Corp.*

Pre-Printing of Linerboard for Corrugated Boxes—PARKER H. DAVIS, *sales manager, Superior Paper Products Div., St. Regis Paper Co.*

9:30 Package Testing—GEORGE ROSHKIND, *vice president, Container Laboratories, Inc., seminar chairman.*

Package Testing as a Manufacturing Control—PETER J. HAKIM, *product-development engineer, Market Research Dept., Union Bag-Camp Paper Corp.*

Package Testing for Product-Protection Determination—CARL J. BEGEMANN, *merchandise manager, Supreme Products Div., A. S. R. Products.*

Loaded Package Testing as a Vital Link to Successful Importation—JEROME W. KIRSCHBAUM, *division manager, Container Laboratories, Inc.*

Package Testing—A Vital Tool of Creative Selling—JEROME J. KIPNEES, *vice president, package engineering, Atlantic Gummed Paper Corp.*

The Development of Testing Standards—MAURICE A. BURNSTON, *technical assistant, The Technical Assn. of the Pulp & Paper Industry.*

12:15 Luncheon and Address: The Hearings on Packaging and Labeling Practices and Your Package—SEN. PHILIP A. HART (*Mich.*), *chairman, Subcommittee on Antitrust and Monopoly, U. S. Senate Committee on the Judiciary.*

Three Concurrent Seminars

2:30 Drug and Pharmaceutical—CHARLES SPANNELLO, *director of purchases, Schering Corp., seminar chairman.*

Tablet and Capsule Packaging—WILLIAM DUNLOP, JR., *administrative assistant, Wyeth Laboratories, a Div. of American Home Products.*

Liquid, Cream and Powder Packaging—PAUL H. SCHULZ, *manager, package development and procurement, Ciba Pharmaceutical Products, Inc.*

Sterile Pharmaceuticals—NATHAN C. KIRSCH, *manager, sterile-product department, Schering Corp.*

Quality Control of Incoming Material—DR. MARVIN J. CHERTKOFF, *manager of quality control, pharmaceutical production, Merck, Sharp & Dohme, a Div. of Merck & Co.*

2:30 Industrial Packaging—CHARLES J. ZUSI, *packaging consultant, seminar chairman.*

The World Situation in Fibreboard Packaging—HARRY J. BETTENDORF, *president, Board Products Publishing Co.*

Current Developments in Wooden Packaging—THOMAS J. LUDDY, *secretary, National Wooden Box Assn.*

Packaging Advances in the Automotive Field—RALPH A. O'REILLY, JR., *Ralph A. O'Reilly & Associates, packaging-manufacturers' representative.*

The Place of Foams in Industrial Packaging—HERBERT A. EHRENFREUD, *DeBell & Richardson, Inc.*

2:30 Food Packaging—EUGENE J. KANE, *manager, packaging research, Thomas J. Lipton, Inc., seminar chairman.*

Expanding the Polyethylene Extrusion-Coating Art—DOM A. PERINO, *manager, Development Div., Milprint, Inc.*

Polypropylene's Place in Flexible Packaging—FRED B. SHAW, *general manager, research and development, Flexible Packaging Div., Continental Can Co.*

Polyvinylidene Chloride Coating Latices—OSCAR W. KAALSTAD, *manager, sales development department, organic chemicals, Dewey & Almy Chemical Div., W. R. Grace & Co.*

Technical Requirements for Boil-In-Bag Packages—JAMES W. COYLE, *technical director, Flexible Packaging Div., Standard Packaging Corp.*

Vacuum Packaging in Flexible Materials—N. W. POSTWEILER, *manager of sales, Flexible Packaging Div., Riegel Paper Corp.*

6:00 President's Reception

7:30 Packaging Institute Awards Dinner—An Evening in Hawaii *theme.*

Friday, Oct. 20

9:00 Registration

Three Concurrent Seminars

9:30 Flexible Packaging—BRUCE MILLER, *Elm Coated Fabrics Co., Inc.,*

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The ideal product-container combination is vitally important in the grocery field...where competition is the keenest!

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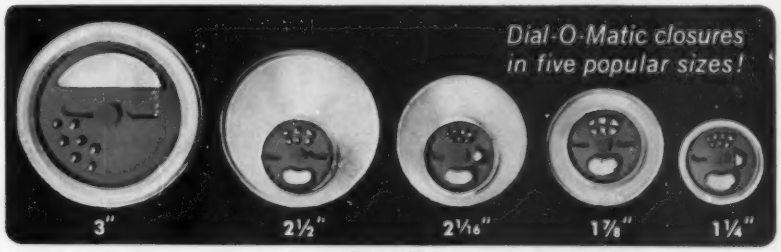

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seminar chairman; JAMES HOULE, *Tee-Pak, Inc., seminar co-chairman.*

Oriented Polyvinyl Chloride Film—WOODROW J. VOGEL, *manager, Film Div., Reynolds Metals Co.*

Sealability and Machinability of Polypropylene—R. L. WIBBENS, *plastics-sales development, Hercules Powder Co., Inc.*

Flexible Packaging Overseas 1961—LOWELL K. HANSON, *general manager, Overseas Div., Continental Can Co.*

Laminated Films Add Up to Better Packages—DRURY R. BURTON, *manager, technical service and development, Converting Div., The Dobeckmun Co., a Div. of Dow Chemical Co.*

Polypropylene Films—RALPH M. WINTERS, *manager, market development and technical service—film, AviSun Corp.*

9:30 Adhesion—F. C. PALERMO, *research, Johnson & Johnson, seminar chairman.*

Starch and Dextrine Adhesives—Past, Present and Future—VINCENT K. SMITH, *chief chemist, American Adhesives Co.*

Resin Adhesives for Straight-Line Gluing—EDWARD J. MURRAY, *development group leader, Morningstar-Paisley, Inc.*

New Developments in Synthetic Resin Hot-Melt Adhesives—ROBERT S. FORSYTH, *senior chemist, National Starch & Chemical Co.*

A Food Processor Looks at Adhesion Problems—W. TATE HUTCHINS, *package technologist, The Kroger Co.*

Important Factors in Carton Sealing—RICHARD J. NADASKAY, *process engineer, packaging, Personal Products Corp., a Johnson & Johnson Co.*

9:30 Food Additive Problems—ADOLPH MILLER, *vice president, research and development, Milprint, Inc., seminar chairman.*

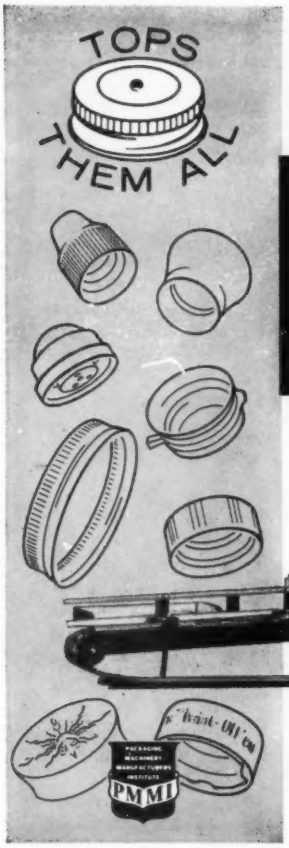
The Effect of the Food Additives Amendment on Paperboard—DR. E. BRUCE BROOKBANK, JR., *patent coordinator and director of food-additives-law compliance, The Mead Corp.*

The Effect of the Food Additives Amendment on Paper—DR. C. R. CALKINS, *director, research and development, Riegel Paper Corp.*

The Effect of the Food Additives Amendment on Foil and Film Laminates—DR. W. P. ANDREWS, *director, Materials Research Dept., Reynolds Metals Co.*

The Effect of the Food Additives Amendment on Adhesives—DR. HOWARD KANE, *vice president and technical director, Polymer Industries, Inc.*

12:15 Luncheon and Address: Your Future, Your Package and You—ROBERT D. GLIDDEN, *vice president, Personal Products Corp., a Johnson & Johnson Co.* ●



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up to 120 or more innerseals per minute!

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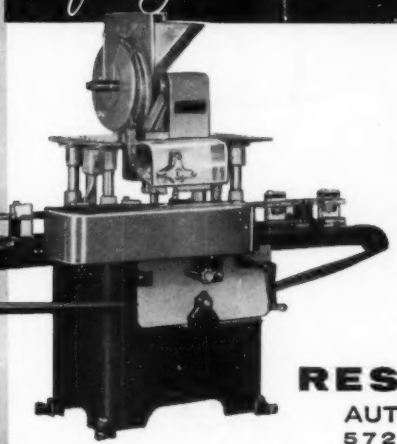

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Testing packages in your own plant cuts shipping damage to a minimum and can often save thousands of dollars by revealing overpackaging. Eliminates time consuming test shipping. Detects unsuspected weaknesses in product as well as packaging.

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Hazardous-substances labeling regulations

The Food & Drug Administration has published, in the Aug. 12 *Federal Register*, regulations informing packagers of household-chemical products of labeling requirements which must be complied with under the Federal Hazardous Substances Labeling Act. Target date for enforcement of penalty provisions of the law is Feb. 1, 1962. Recognizing that many affected packagers will have difficulty in complying fully on such short notice, F&DA reports that it will permit manufacturers to develop temporary measures—such as stick-on interim labels and hang tags—to provide the required warning information on their packages.

Among requirements of the newly published regulations (involving substances which are declared hazardous because of toxicity) are:

1. The signal word and statement of principal hazard or hazards must appear on the main package panel, with instructions to read carefully other cautionary information that may appear on the container.

2. The word "poison" and the skull-and-crossbones must be used for highly toxic substances.

3. The signal word and statement of hazard must appear in capital letters of specified type size (usually 18 and 12 point); in no event is it to be less than 6 point. ●

Sounding Board—'deceptive packaging'

[*Continued from page 68*]

that deception does add. Actually, greater confirmation of product superiority in the form of properly placed and worded copy is a positive area for the designer to pursue.

Robert E. Cameron, *Purchasing Agent, The Distillers Co., Ltd., Linden, N.J.:* One of the methods of controlling deceptive packaging might be standardization. Of course, manufacturers don't like to see their package look like everyone else's. The penalties for violations might be increased so that all packages have to be recalled—or if the industry requires licensing, as the liquor industry does, then the license of offenders could be revoked.

There might be a requirement such as we have in the liquor industry that ingredients or sizes appear in a certain place on the package and in a certain color or type so that they can be readily seen by the consumer. In our industry, I believe, the print cannot be less than 8-pt. Gothic. This means that descriptions of the contents, proof and elements must be at least that large. Also the print must be of contrasting colors.

Ben Rosen, *Director, Ben Rosen Associates, New York:* What *is* "deceptive packaging"? I'd like to venture that it is more often bad design rather than a conscious planned effort to deceive.

As an independent designer concerned with long-range marketing trends, it seems to me painfully clear that management which embarks on a program of planned deception (as opposed to using merely incompetent work) is engaged in business hara-kiri. I would suggest that steps toward control might include the following:

1. The very small number of manufacturers who can be proved to have a real intent to deceive must be policed and penalized by their own particular industries.

2. Staff designers who serve either the manufacturer or large suppliers owe it to themselves and their professional status not to rationalize what they know to be mistaken tactics. In the admittedly hard competitive struggle, they have to fight to retain perspective. It's always hard for the specialist to say "no" to management, but the wages of this particular sin are complete consumer rejection. No designer should be asked, nor should any be willing, to forfeit his position as a reputable and skilled professional for the doubtful glory of short-term, highly theoretical sales gains.

3. As management becomes more and more aware of the principles of good design and efficient production, much of what is inept, fumbling and crass will disappear. An increasing reliance on the fundamentals of good design and the will to adhere to them over the long haul will move constructively toward control and elimination of this problem. ●

Installed! And another packaging line reaches towards its goal of peak efficiency, using Bell-Mark equipment.

Whether the requirement is a miniature code on the bottom of a case or a completely printed overwrap, production men have found that Bell-Mark equipment is built a little better, is engineered to the need. Does more problem jobs.

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Manufacturers of coding and printing equipment, automatic marking machinery.

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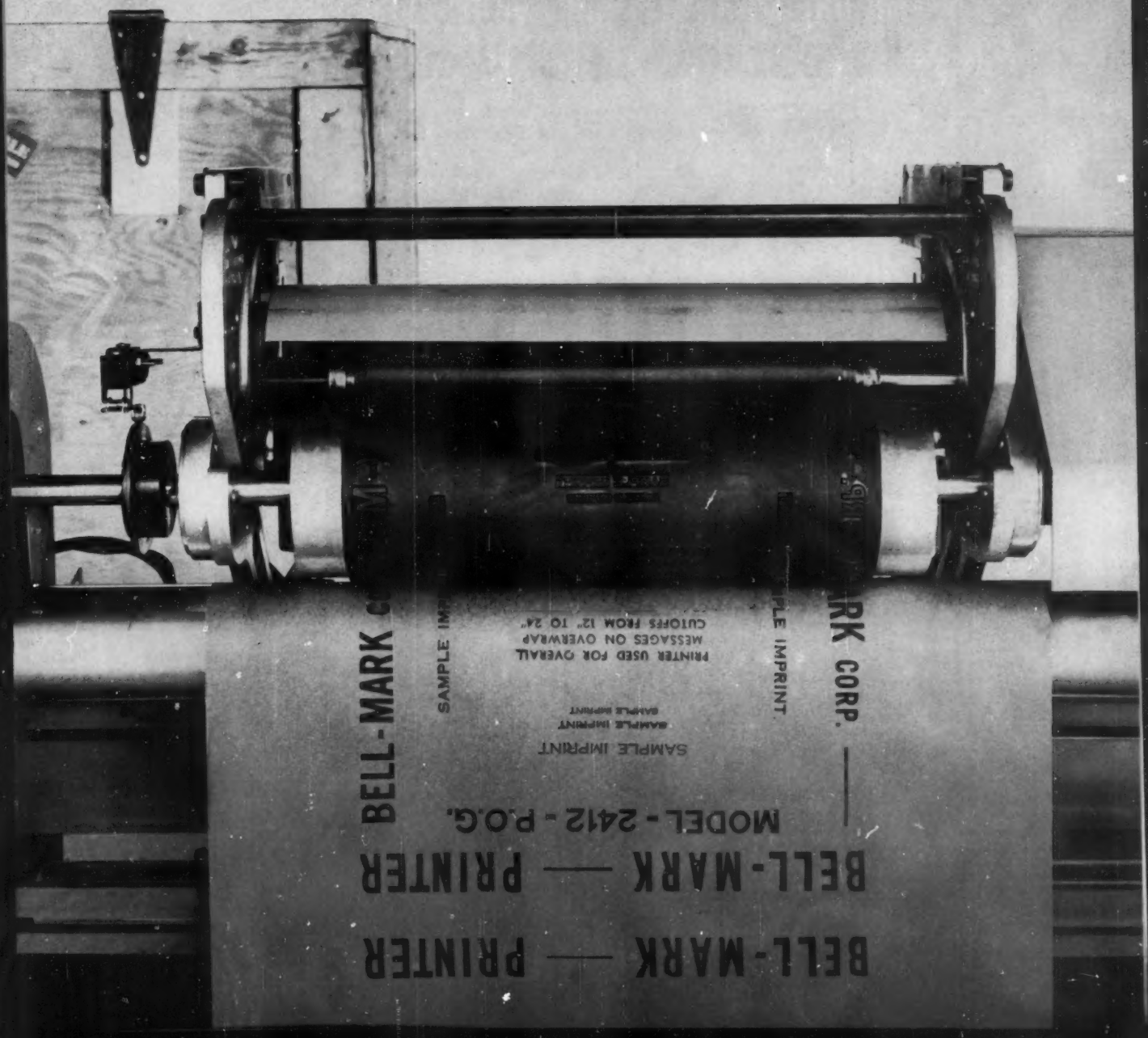
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PRINTER USED FOR OVERALL MESSAGES ON OVERWRAP CUTOFFS FROM 12" TO 24"

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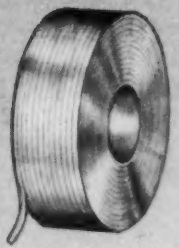

Stitching over 500 boxes per hour is no strain for one man, thanks to the combined talents of *high-speed* Acme Steel Stitching Machines and *stitch-saving* wide crown design. Feeding from a continuous coil of wire, the machine *cuts* the wire . . . *forms* it into 1¼" wide-crown staples . . . *drives* them quick as a flash.

Lowering your wire costs is a double-sure cinch.

1. Since you form your own staples, you pocket the extra money you're now paying for expensive pre-formed staples.
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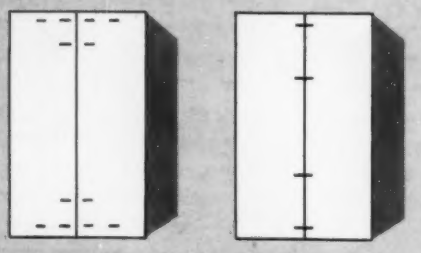
These boxes typify the savings you can expect with wide crown design. Only half, or less, the number of 1¼" wide crowns do the job of conventional narrow crowns.

Have your local Acme Idea Man explain in full the savings potential of wide crown stitching in *your* operation, or write: Acme Steel Company, Dept. MFW-10?, 135th St. and Perry Avenue, Chicago 27, Ill.



Approved for Uniform Freight Classification Rule 41 and by the National Container Committee.

ACME STEEL

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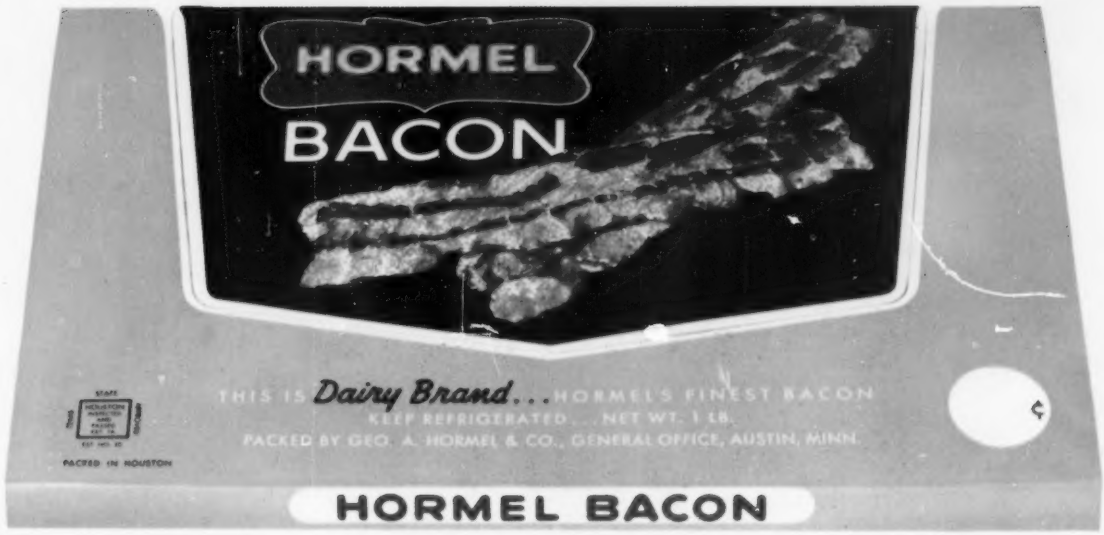
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THIS IS Dairy Brand... HORMEL'S FINEST BACON
KEEP REFRIGERATED . . NET WT. 1 LB.
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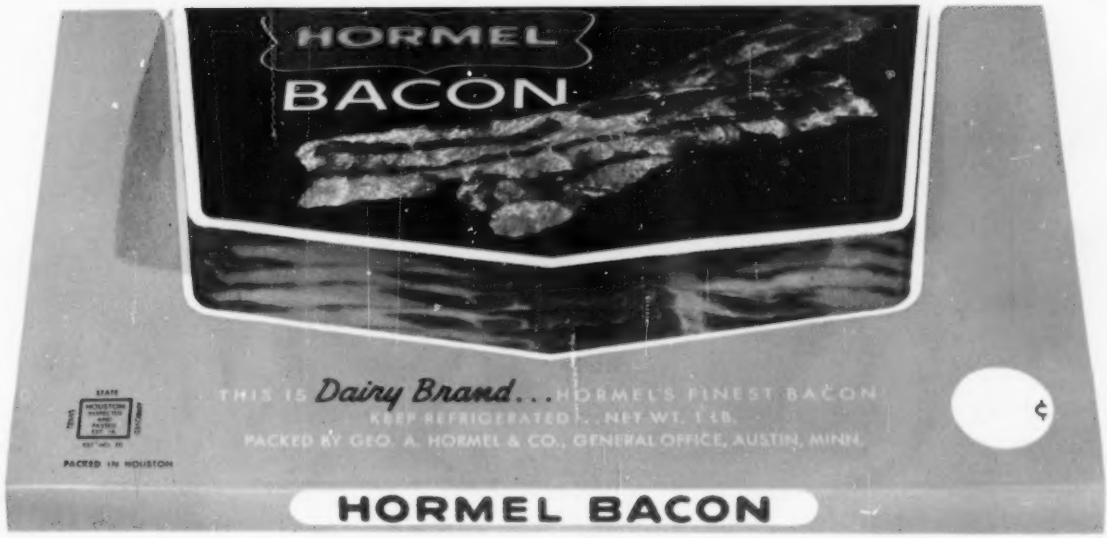
HORMEL BACON

to look as crisp as it tastes...


HORMEL
BACON
THIS IS Dairy Brand... HORMEL'S FINEST BACON
KEEP REFRIGERATED . . NET WT. 1 LB.
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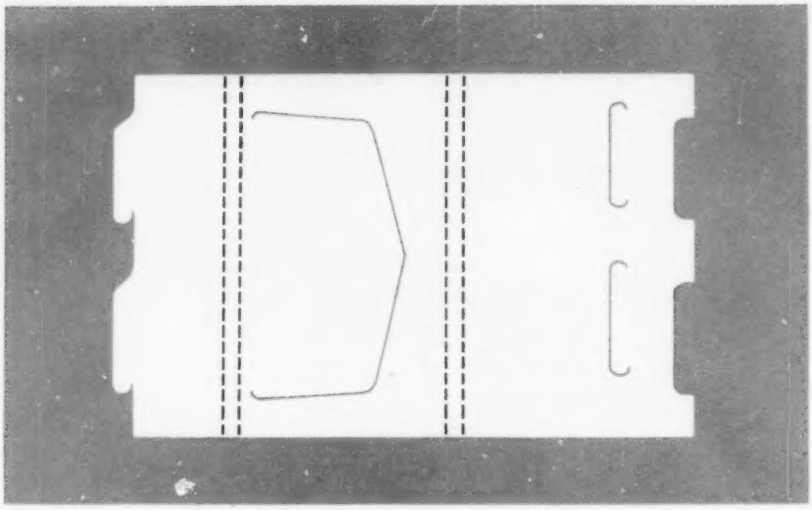


Details of Mullinix Bacon Folder made of TEXCOTE and printed by Western-Waxide Division of Crown-Zellerbach Corp. and Milprint, Inc.

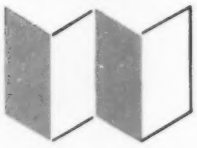
Why TEXCOTE can "bring home the bacon" for you

BRIGHT WHITE

The exceptional brightness and whiteness of TEXCOTE insure faithful reproduction of process colors. Packages look fresh, even after long shelf life.

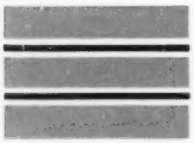
GOOD WAXING

TEXCOTE was especially developed to provide outstanding waxing characteristics for paraffined cartons and frozen food containers.



GOOD FOLDING

TEXCOTE has extremely good folding qualities. And its high strength keeps folded edges crisp.



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Centralized research

[*Continued from page 149*]

printing inks and adhesives, and thus can all share the same types of expensive test and pilot equipment, which would be too costly for any one of them individually.

As an example, there is a project under way now to cold form various plastic sheets, using metal-forming machinery and techniques, that may enable containers to be made much more swiftly from crystalline plastic materials by eliminating slow heating and cooling procedures.

Dovetailing with manufacturing projects in Metal R&D and Central R&D is a General Packaging program for the design of high-speed printing equipment for plastics bottles, which will permit decorations to be added automatically to both sides of rectangular containers such as detergent bottles at a rate in excess of 100 bottles per minute. This research is being coordinated with investigations of resin compositions and mold design which, it is hoped, will produce smoother printing surfaces. And food-processing specialists from Metal R&D have also helped devise a new laminated polyester-foil-vinyl pouch that can be subjected to the high sterilizing temperatures and pressures in canning retorts.

Growing interest by packagers in composite cans, particularly for oil and citrus products, is reflected by another research program in high-speed methods for making such containers and in new spiral-wound laminations using foil on the outside and various plastic films on the inside for economy and better performance. All of these programs have drawn experts from more than one product or research division to help solve complex questions.

Newest of the applied-research facilities is the Glass R&D in Plainfield, which opened early in 1961. Here, much of the long-range research is done in cooperation with Central R&D. Fundamental methods of melting, molding and annealing glass are being studied for improvement. First, however, new process-control equipment and methods must be developed to find out exactly what happens during manufacturing and to move measurement and inspection from the cold end of the lehr to the point immediately

how the unique

100% POLYCLEER®

RAK-IT-PAK

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BOOST PROFITS

With its bag and header *both* made of tough, sparkling Polycleer Material, the new all-in-one Rak-It-Pak display bag will make your product stand out and sell *more* . . . protect it until used . . . cut your packaging and labor costs 40%-60%.

NO PAPER HEADER

. . . no cardboard insert. Rak-It-Pak's sturdy built-in heade *alone* saves paper costs, printing, stapling, grommeting.

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Rak-It-Pak keeps your product dust free and *bright in your customer's eye* until sold.

SAVES ON LOADING AND SEALING, TOO!

Simply load and seal the Rak-It-Pak and your product is ready for market. Reduces your labor costs, increases your profits.

For rapid feeding and improved sealing, Northland recommends — and supplies — the new Bag-O-Matic Poly Heat Sealer.

NORTHLAND designs, produces and prints the Rak-It-Pak in 1-2-3 colors . . . many sizes, styles and gauges — for quantity users. Write or call Northland today for details and samples.

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Your DEPENDABLE Source for Every Die Need!

CUTTING DIES

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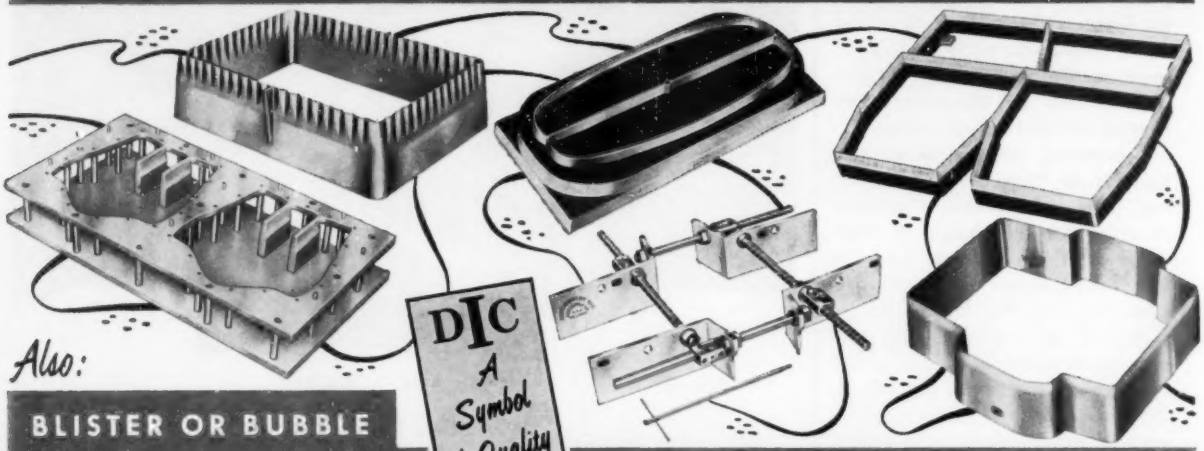

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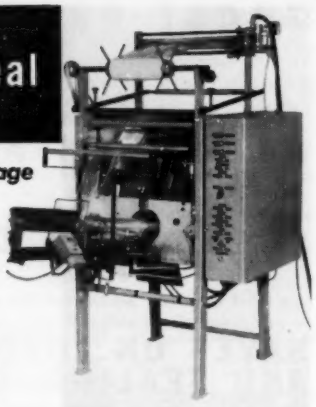
NEW
Form-Fill-Seal MACHINE



...offers complete package in single cycle!

Feeds the product, forms bag, seals side and one or both ends and delivers—that's the new Pratt machine for packaging light, medium or heavy products in single or multiple pack, loose or in tray. Uses sheet roll film, plain or shrink type, ¾ mil to 3 mil thickness. Versatile size range for handling products 5" to 16" long, 2" to 6" wide, or special sizes as required; forming mandrel shaped to suit your product. For faster production at less cost, write, wire, or call today for complete details.

- **Positive feed mechanism** (not gravity) can be horizontal, downhill or uphill. Unit can be hand loaded or conveyor fed.
- **Variety of Products.** Handles foods, metals, paper or plastic products, etc., in a variety of forms. Mandrel shaped to fit your product.
- **Quick Changeover:** 10 minutes or less for complete size change.
- **Fast Production:** Averages 30 packages per minute (varies with product size, loading, film).
- **Cut-off:** Electric eye for printed film, or mechanical control for plain film.
- **Job Selected Control:** Choice of manual control for activating single cycle, or automatic control for continuous cycle repeat.

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Custom Built Converting and Packaging Machinery
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making compacts?

Powder pack them automatically, economically, to top quality standards with the precision-built Arenco-ALITE compacting machine. The Arenco-ALITE is designed for rapid powder changeover and minimum maintenance. Ideal for the new cream-powder compacts from 1" to 4" major dimension. Recovery system with quick-change bags eliminates waste. Shipped complete and self-contained, as specified. National sales and service facilities. Write for literature and quotation.

ARENCO
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after the container has been formed and while it is still hot.

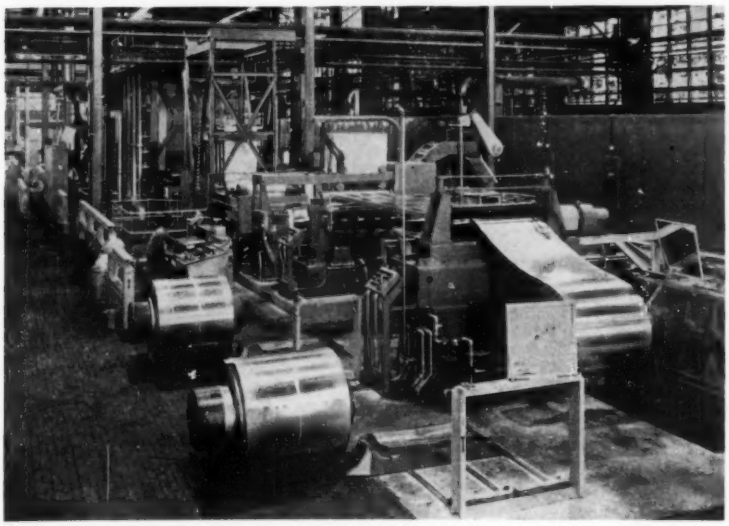
Other research that is of direct interest to packagers is being carried forward simultaneously—primarily in the field of decorative and protective coatings. This work has required extensive cooperation between glass technologists and polymer chemists. A large program is directed toward finding new organic coatings, such as vinyls, acrylics and epoxies, which can be used to tint glass more effectively than nitrocellulose and ceramic colors.

To protect the outer surface of bottles from scratching (a major cause of glass breakage), a new coating has been formulated that can be economically applied as a water emulsion, yet once dried cannot be washed off by water. And even more specific polyethylene- and silicone-type coatings are also under test that will be applied to the finish on a bottle to prevent dripping of liquid products during pouring.

Dependence of many of these research projects on the talents and facilities of many research departments graphically illustrates the advantages of centralized location for research and of the administrative philosophy that permits an efficient exchange of specialized personnel and equipment to meet the shifting demands of technical development—two points that both large and small packagers can apply in their own packaging programs. ●

New Kaiser aluminum can-stock line

Aluminum in packaging is expected to get a boost from a new high-speed can-stock production line just completed at Trentwood, Wash., by the Kaiser Aluminum & Chemical Corp. now Florida citrus juice, which is expected to consume 1½ billion 6-oz. cans this year, about 80% of them aluminum, according to Kaiser. Other big potentials for the



Aluminum coil in the degreasing and flattening unit on Kaiser's new can-stock processing line located at Trentwood, Wash.

The marketing objective is to turn out aluminum for packaging at a competitive commodity price. Estimated to cost more than $2,000,000, the new facility will produce uncoated sheet and coated and uncoated coil for the first time on a fully automatic line under one roof, according to Kaiser.

Kaiser estimates that U. S. can makers will require 100,000,000 lbs. of aluminum for cans this year, a 150% gain from 1960. Biggest product use in number of cans is metal lie in the motor oil, tuna fish and salmon industries.

Significant in Kaiser's new project will be economical high-volume output of can-stock aluminum in standard gauges and sizes to permit competitive pricing with other can materials, although Kaiser will not disclose expected prices. The aluminum industry will be satisfied if it has 10% of the can market in five years, according to Kaiser executives. Its present share is less than 1%. ●

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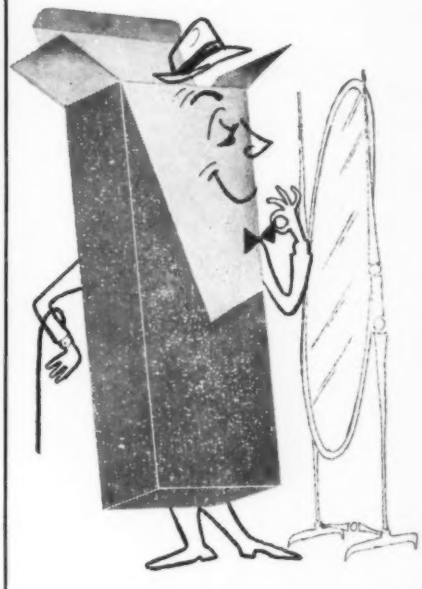

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If you bottled beverages back in 1890, you had about ten different types of caps to choose from—ranging from cork and wood plugs to flat, circular valves. None of them worked too well. Then a man named Painter invented the crimped crown cap made from tin plate. He patented it in 1892, and it soon replaced every other type of closure in its field. It was easy to decorate, easy to apply, and it sealed in carbonation with the grip that only steel has. And it was inexpensive enough to be used once, then thrown away. Tin plate crown caps are still the only type on the market because nothing else can do the job as well; nothing else has the complete approval from manufacturers, beverage companies, and consumers. The beverage industry uses about 46½ billion of them a year—and they cost less today than when they were developed 70 years ago. The producers of tin plate and the manufacturers of crown caps have worked that long to develop better methods of production for a better product at less cost.

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A major part of consumer acceptance of your product depends upon the package it comes in. And the package is only as good as the closure that seals it. That's why most closures are made from tin plate. Your package designers select it because tin plate can be made in the sizes and shapes to fit your container. Your production people recommend it because tin plate can be processed on high-speed machinery—to keep costs down. Your marketing people endorse it because tin plate can be easily decorated and marked with your brand. Consumers buy it because tin plate threads and lugs don't lose their grip—the container is easy to open and close hundreds of times. Tin plate is on top because it belongs there.

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F&DA drug regulation

The Food & Drug Administration has published a new labeling regulation requiring manufacturers of prescription drugs and devices to include a detailed informative insert in the packages for such products. The package insert must provide complete information for physicians and pharmacists on safe, effective use of the prescription item. It also must provide warning information indicating when use of the product would not be safe.

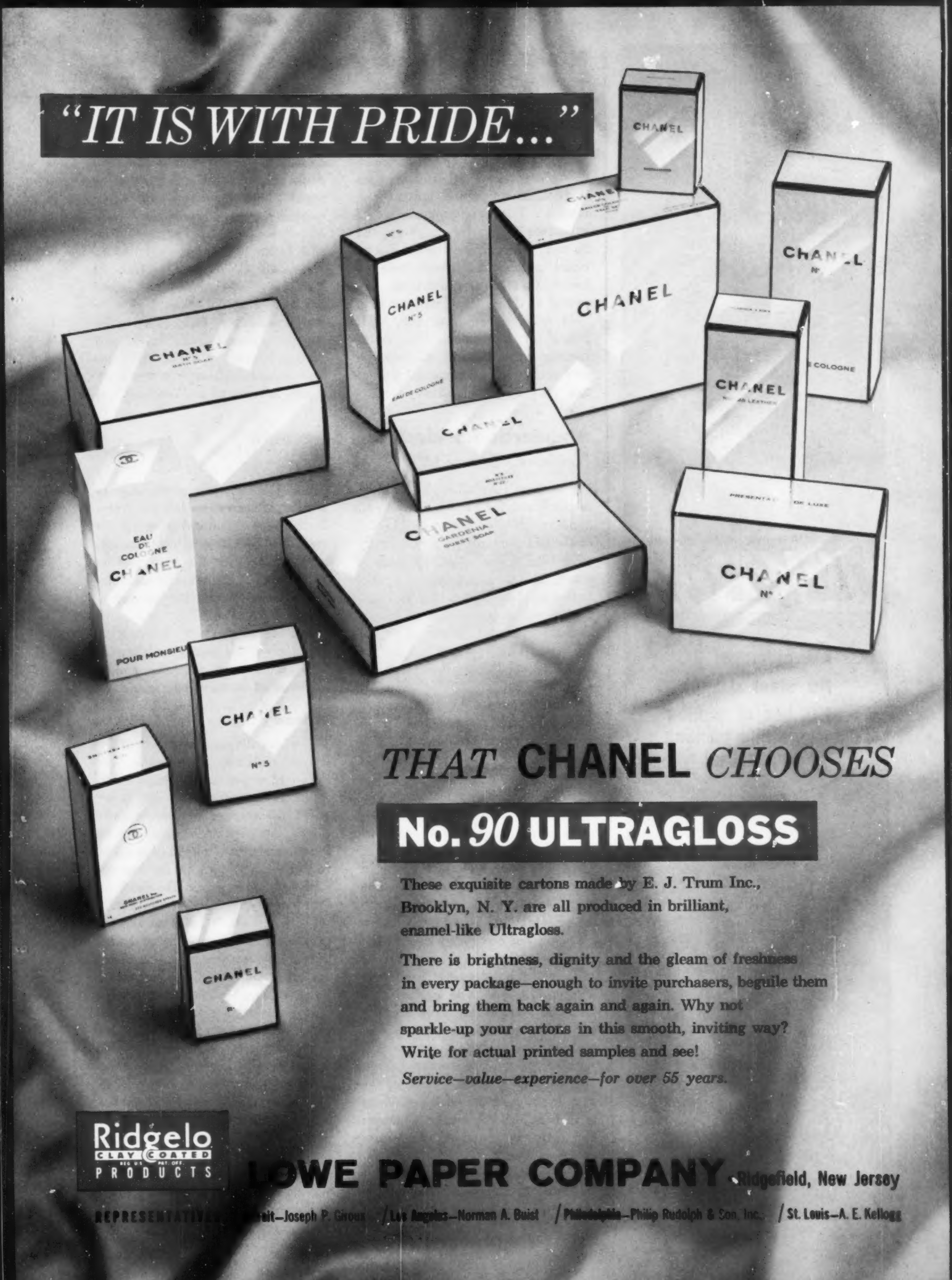
The new regulation becomes effective March 5, 1962. According to F&DA Commissioner George P. Larrick, the requirement was deemed necessary to promote greater safety and efficacy in the use of prescription drugs and devices. F&DA adds that exemptions may be considered "when other reliable sources of the same information become established, but not to the extent of relieving the manufacturer of his legal responsibility for labeling with adequate information."

The new drug-labeling regulation will not require that professional information in package-insert form accompany products for which such information is "commonly known" to physicians. ●

PI publications

The Packaging Institute has begun a policy of disseminating its publications free to PI members. Continuation of the practice, says PI, depends entirely on its receiving sufficient additional orders from non-members of the institute.

New PI publications (and the price of each for non-members) are: Adhesion to Board Manual ($5); Closure Sizes and Gages—O 2r-61 ($1); Conditions for Storage of Cap Liner Materials—P 1r-61 (25 cents); Determining Moisture Content of Liner Materials Composed of Paper or Paperboard—T3206p-61 (25 cents); Standard Checklist for Carded Packaging—O 1p-61 (25 cents); Bulge and Compression Testing—SR 61-2 ($1); List of Aids to Inspection (Glass)—SR 61-2 ($2), and Standard Procedure for Acceptance Sampling and Inspection of Glass Containers—SR 61-3 ($2). Orders for these publications should be made to The Packaging Institute, 342 Madison Ave., New York 17. ●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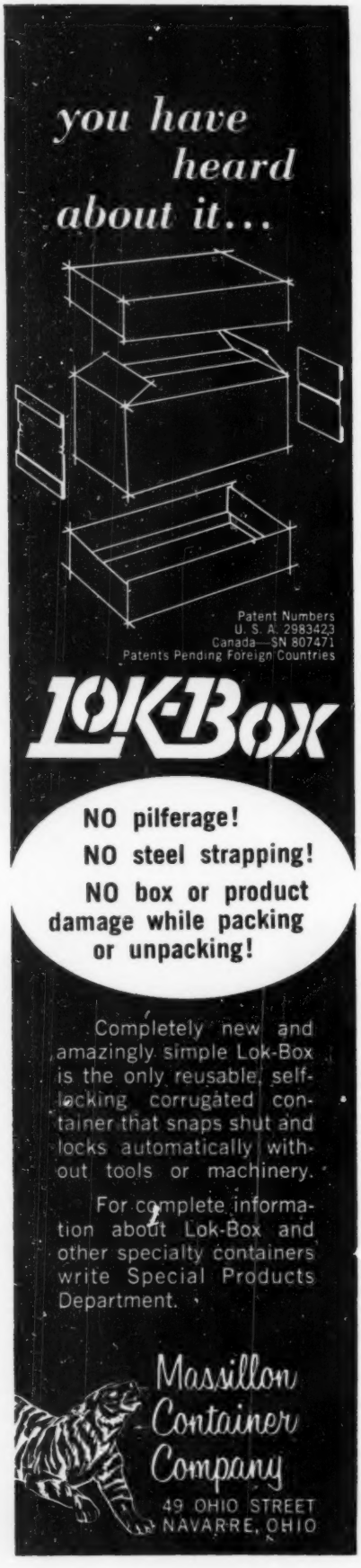
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MSU School of Packaging news

The advisory committee of Michigan State University's School of Packaging has approved a new scholastic program designed to afford more adequate treatment of the merchandising aspects of the package than is possible under the present curriculum. The new program would substitute 14 term hours of art and 20 term hours of psychology for an equal number of physical-science hours. College and university approval of the program are pending.

In other news from the MSU School of Packaging, four multi-sponsor basic research projects are now under way. Announced earlier this year as joint industry-faculty-student packaging projects (see "Research Proposal at Michigan State," MODERN PACKAGING, April, 1961, p. 200), they are: control of damage in shipment; sealing of packaging materials at high machine speeds; use of water-vapor-permeability rates in design for a definite shelf life, and gas permeabilities as a factor in package shelf life.

Howard C. Blake III (MS in Packaging, MSU, 1960) has joined the Packaging School staff as a research associate under the multi-sponsor program. Hugh E. Lockhart (MS in Packaging, MSU, 1960) has been named an instructor and is assigned to research and teaching. ●

Standards for electrical diagrams

[*Continued from page 142*]

cal motions that take place in the machine and the electrical resultant.

Sequence of operation can be described in a running account or by means of a bar chart. In such a chart, the "X" axis represents push-button operations, machine motions, limit-switch trip and release points, and timer-timeout points, while the "Y" axis reflects energized or de-energized condition of relays or solenoids. The bar chart is probably the best layout for a trouble shooter who is able to understand and read wiring diagrams with ease. The written description, however, is helpful to average maintenance men.

Hypothetical example

As an example of a complete wiring diagram, drawn to standards of good practice, let us consider a hypothetical drawing for a machine that accepts a package and overwraps, tucks, folds and seals it, discharging the completed unit to the next operation (see Figure 2). In the elementary drawing (center in Figure 2), it will be noticed that standard symbols have been used for all components (including the control source), devices are identified, terminal points are numbered, horizontal circuit lines are numbered for easy location of the device, contacts have been located, and pushbuttons and selector switches are represented properly.

The interconnection diagram (left in Figure 2) shows the physical position of all devices on the control panel (though not necessarily to scale). All other devices are shown in the same relationship as on the machine. To retain a neat, uncluttered appearance for easy reading and tracing of the wires, a combination of wireless and harness representation is shown.

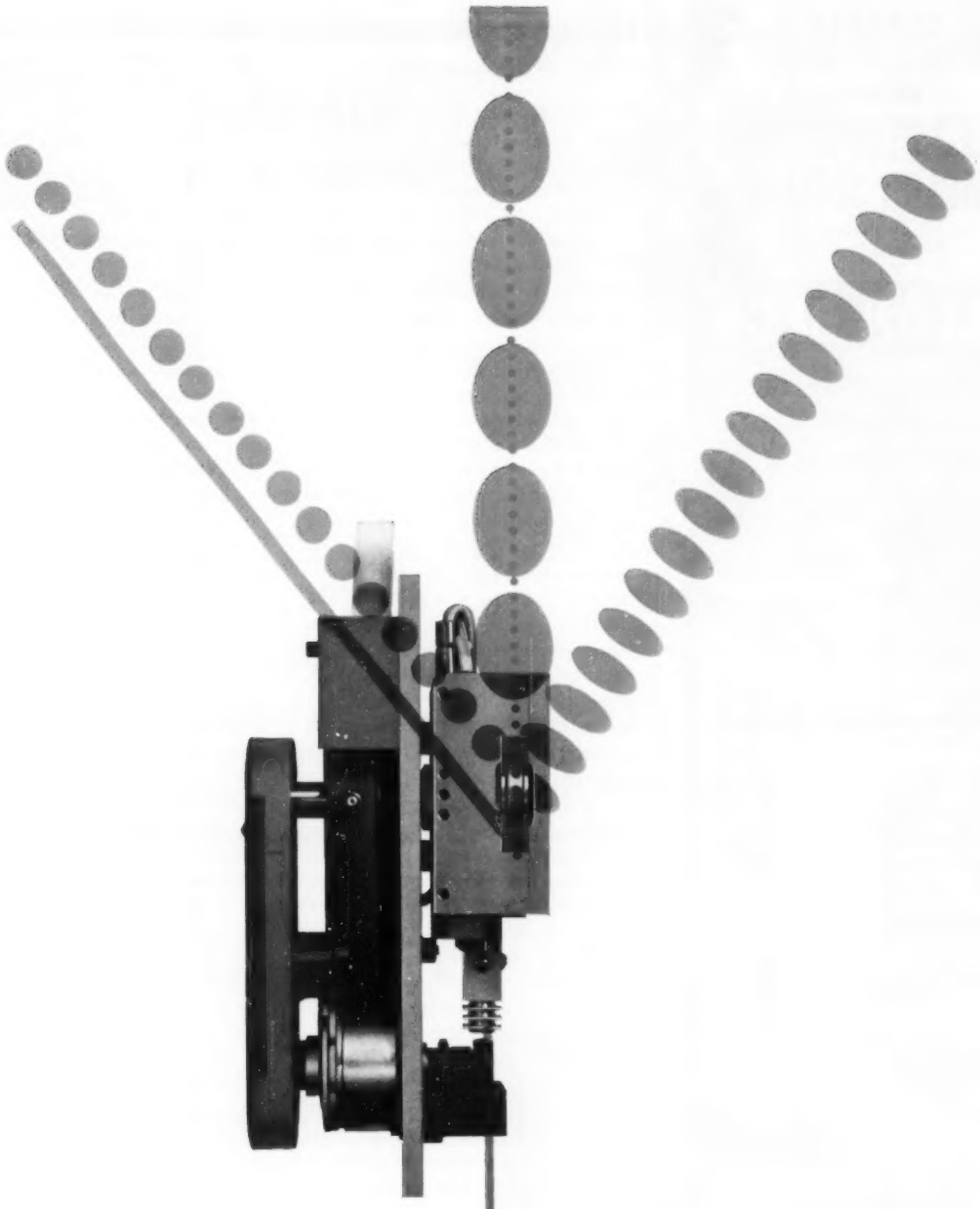
The supplementary information lists the catalog number of devices used, limit-switch sequence and a sequence of machine operation.

Summary

A wiring diagram, complete to the degree outlined, is a tremendous time- and money-saving device. From the manufacturer's viewpoint, it reduces the number of trouble calls that a designer or engineer would have to make. It is a good permanent record for machines of obsolete design still operating in the field, or for specially modified equipment.

From the user's point of view, a good electrical diagram helps to reduce costly service time by facilitating quick understanding of electrical functions in packaging equipment.

In summary, a standardized form of wiring diagram with complete information is so necessary that it should become a requirement in the electrical phases of packaging. The symbols adopted by the ASA in the methods and form outlined here should be given careful consideration by both users and manufacturers, so that some satisfactory version may be incorporated in final electrical standards for packaging. ●



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Ideas from military

[*Continued from page 132*]

freeze-dried food inside. The container thus acts also as a cooking utensil. The prepared food may be eaten directly from the container or ladled into individual mess kits. An adaptation of the idea might have commercial use for camping supplies, on-the-job lunches, etc. But the super barrier itself could have wide packaging implications.

Slightly less than 4 mils thick, the barrier uses three materials: 3 mils of polyvinyl chloride inside (for heat sealability, grease resistance and general protection), ⅓ mil of foil in the middle (further to impede water-vapor and gas transmission) and ½ mil of polyester outside (primarily for strength).

F&CI concedes that its super barrier is expensive and over-qualified for most commercial uses. Few food packagers other than the military need a three-year shelf life. Now that it has developed a combination of materials which will perform the rigorous task required, F&CI is experimenting with substitutes for the plies to lower cost.

For instance, the ply of foil was first specified as 1 mil because freeze-dried foods require a water-vapor transmission rate of absolute zero and a maximum of 2% oxygen transmission. Vinyl's transmission rate for both gas and water vapor is fairly high, hence the 1 mil of foil. But F&CI discovered that ⅓ mil of foil could do an even better job. Despite some pinholing of the ⅓-mil material which is not present in heavier gauges, the vinyl fills in any pinholes and the thinner foil is more flexible and resists cracking.

The 3 mils of vinyl are necessary because of the bag's gusseted construction. Bag flaps don't always meet precisely and the softened vinyl flows and fills in any gaps. F&CI is now testing 2 mils of vinyl. Should results prove satisfactory, bag costs would decline appreciably. The 2-mil gauge is more readily available from film suppliers without special order.

The ⅓ mil of polyester on the outside, mostly for strength, may be replaced with paper—reducing costs still further if tests show that barrier qualities are not impeded.

No rose is without its thorns, however. Because F&CI's super-barrier lamination is so tough it is virtually impossible to open without a sturdy knife, a contract is now being let to an outside supplier for development of an integral opening device.

Also under development is a machine to form, fill and seal the packages automatically. F&CI's prototype work has been with pre-formed bags glued by hand into the fibreboard blanks, then filled and sealed manually. Before the package can become standard issue, an automatic machine must be perfected. Studies with equipment suppliers will determine (1) what machinery, if any, is available to do the job, (2) what modifications of existing equipment might be successful and (3) what components of an automatic machine need designing from scratch.

The 100,000 packages produced on contract for field testing during maneuvers in May were turned out semi-automatically. The bag was formed on a special mandrel and the box set up by hand. Bag and box were not attached, although F&CI wants the two to be glued together for large-scale production.

The probable final arrangement will be cartons supplied in the flat with bags already attached, although open at both ends. On the packaging line, one end of the bag will be sealed and the adjacent carton end sealed. Product will then be filled, air evacuated and replaced with nitrogen and, finally, the other end of both bag and carton sealed.

F&CI has found vacuum packaging unsuitable for freeze-dried foods. They are very brittle when their liquid content is removed and in a true vacuum are abrasive enough to puncture the bag. Oxygen removed from the package to preserve food quality is replaced with inert nitrogen.

F&CI visualizes further cost-cutting potential in standardization of sizes. Although used for a wide variety of menus, the 25-man "module" (unit serving a full meal to 25 men) has been standardized at 12 sizes—only about half the number called for at first—and F&CI hopes to reduce this still further. The six-man module has been standardized at four sizes, differing only in height. All progress toward size standardization will make development of an automatic form-fill-seal machine that much easier. ●

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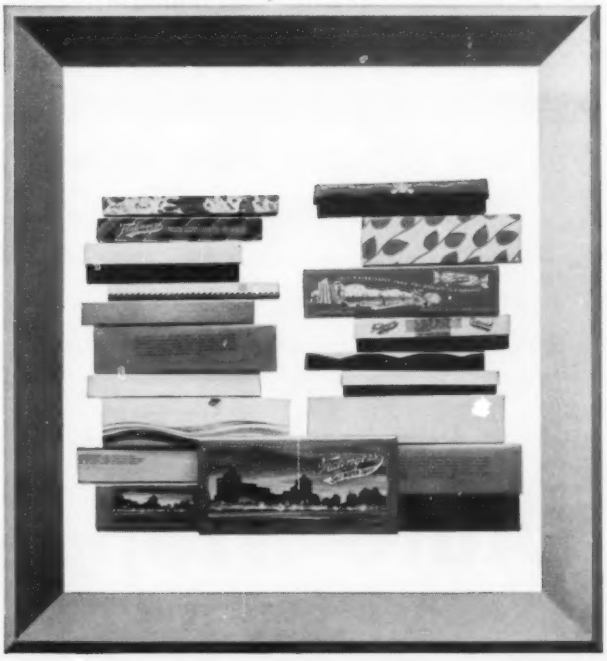

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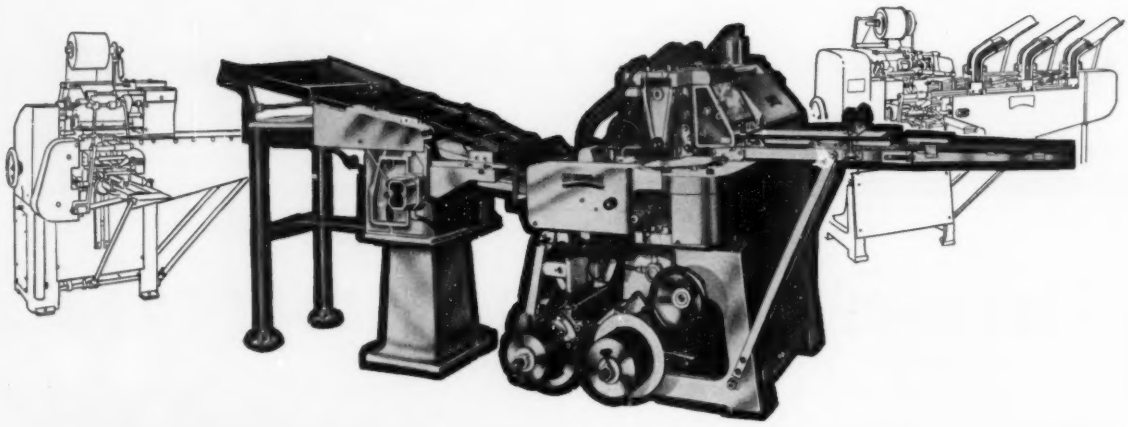

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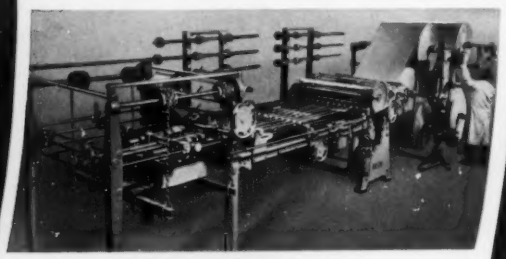

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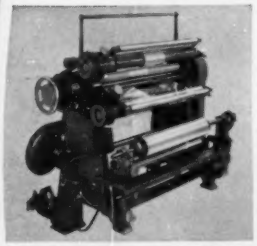

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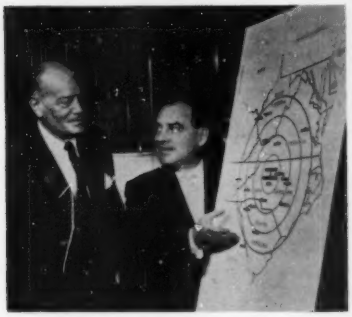
Canco to can soft drinks

To encourage more canning of soft drinks by providing increased production capacity, the American Can Co. has created a new division, Custom Packers, which will contract-package carbonated beverages in



Canco chairman, William C. Stolk (left) and J. Whitney King of Custom Packers Div., with map of one of the six areas to be served by American Can's new contract canning service for soft-drink bottlers.

metal containers. This is said to be the company's first venture in canning of a product. Canco will not market the product nor will bottlers be required to buy Canco cans.

Starting this fall, Canco will build and equip high-speed (700-per-min.) automatic can lines in Baltimore, Cincinnati, Jacksonville, New Orleans, St. Louis and the Winston-Salem-Greensboro area, all selected because of immediate need and a relative lack of such facilities, according to Canco officials.

This $6,000,000 program will be completed by next March, with other sites under consideration.

None of the new sites is tied to a Canco can-making line. The company will serve any bottler but will supply only canning facilities, carbon dioxide, treated water, labor and shipping. Bottlers will supply major ingredients, cans and cartons. No price inducements will be offered. Cost is said to be competitive with existing canning rates, ranging from 15 to 20 cents per case. Although it is expected that initial canning will be in tinplate, the company is prepared to handle any other materials, su[illegible].s aluminum.

Can[illegible] points to the estimated use of nine billion beer cans this year as an added indication of the growing potential for beverages in cans. However, with a U. S. average

[*Continued on page 238*]

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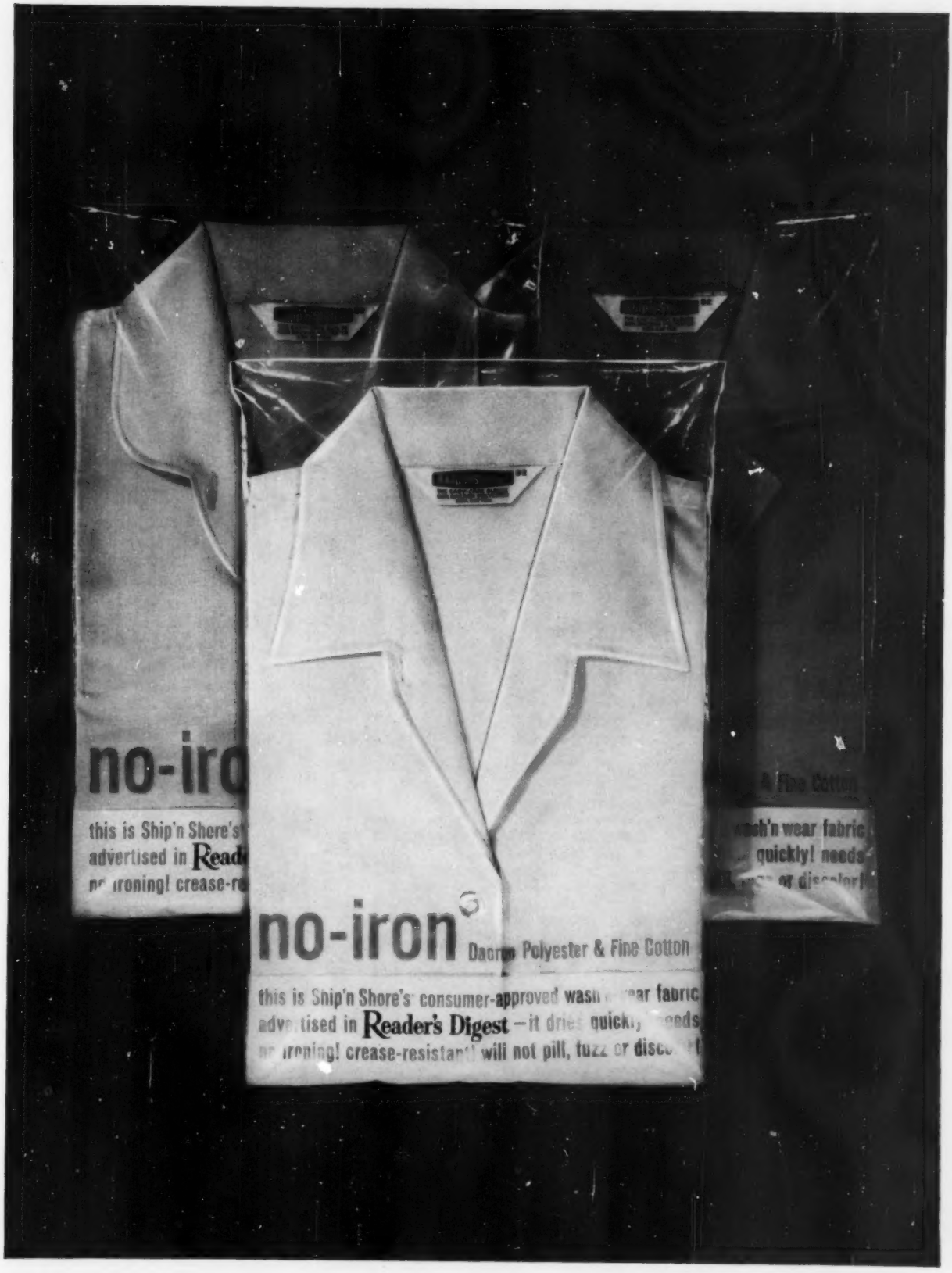
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[*Continued from page 235*]

of less than 3% of soft drinks in cans, the cost of setting up their own canning lines for a portion of their output has delayed expansion by bottlers, leading to its new project, Canco said.

J. Whitney King, formerly with the Canco Div., will be general manager of the new division, with headquarters at 100 Park Ave., New York 17. ●

Success with PVA

[*Continued from page 116*]

U-shaped metal bars which momentarily close on the plastic tube just above the cross-sealing area to shut off product flow during sealing. The slightest trickle of granular products can cause a defective seal. But the product catchers allow the use of extremely narrow cross seals, only ⅛ in. wide, for maximum film economy while maintaining a very low proportion of rejects.

Cross seals are made by an impulse-type strip heater located in the back jaw whose temperature is strictly maintained at 375 deg. F. With cross seals as well as the back seam, heat build-up must be avoided. Water Soluble Products does not use air jets here, but has substituted a water-cooled jaw for the standard back jaw supplied with the machine. Again because of PVA's elasticity, the company has replaced the machine's standard cut-off knife with a cold wire located in the front jaw. The unheated front jaw functions only to apply pressure and to contain the cold wire.

Hydraulic pressure to operate the jaws must be accurately maintained when running PVA, the company has learned. With most films, a slight variation does not matter. But with PVA, hydraulic pressure must not go below below 600 p.s.i. nor above 700 lbs. The packager's machine has heavier-than-normal tubing and extra pressure gauges as protection against hydraulic-fluid leaks. A special electronic circuit with front-mounted gauge allows easy access to cross-seal temperature and dwell-time controls, since these too must be constantly adjusted.

The company will soon take delivery on a second two-tube machine which will be modified in exactly the same manner as the one which is now functioning. ●

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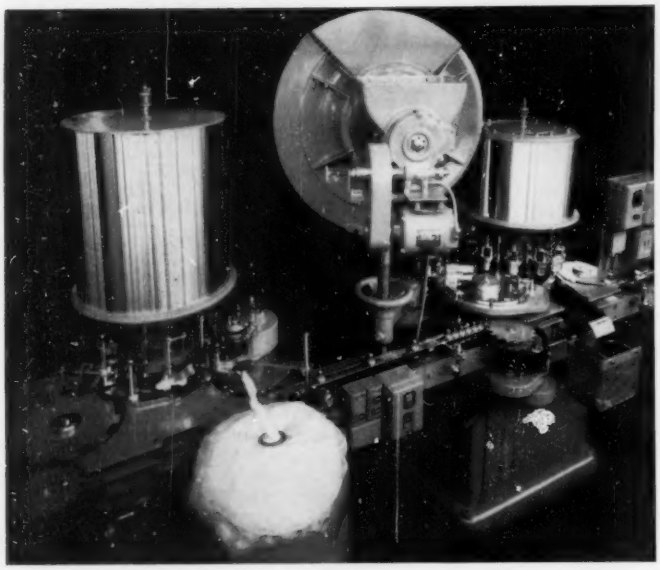

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Model KL-10-TB Consolidated KOTTONER (left) in use with Model D-10-F CaPeM Capping Unit.

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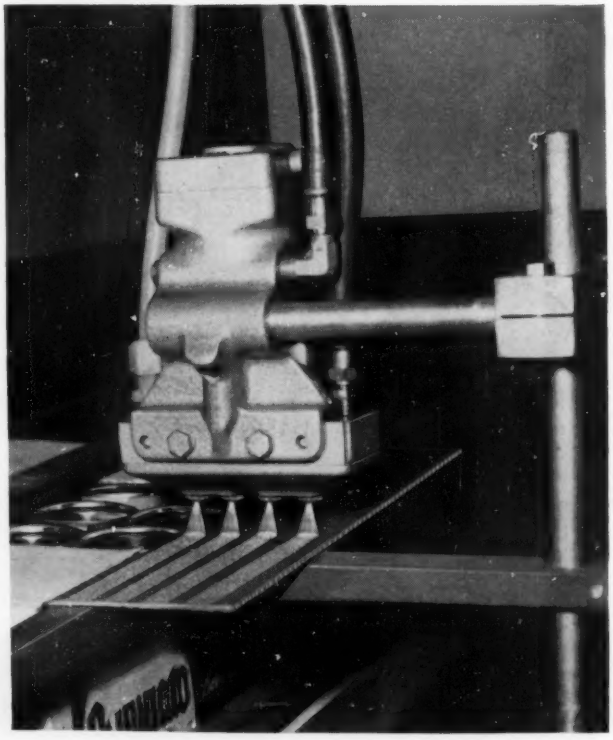

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Packages win new legal protection from imitation

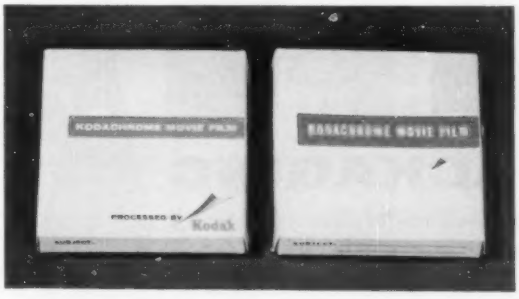
The principle that total package identity is a business asset entitled to protection from imitation by competitors has received significant support in two recent court decisions. A few packages (notably the Coca-Cola and Haig & Haig "Pinch" bottles) have been registered as trademarks because of their distinctive shapes. The law has been less clear about packages of conventional shape that depend for their individuality on color, format and typography of labeling.

Now two major packagers—S. C. Johnson & Son and Eastman Kodak—have new legal protection based on competitors' similar packages. Johnson complained in Federal court in Cleveland that a Vacation car-wash-cream bottle used by the Bell Co. of Cleveland and Westley Industries, its automotive-products division, constituted unfair competition and trademark and copyright infringement. A consent order entered July 26 enjoins Bell and Westley Industries from advertising and selling Vacation cream in a package similar in appearance, color and design to Johnson's bottle and prevents them from using any "confusingly similar" trademark in the packaging of polishes or cleaners.

Similar but affecting a broader range of packaging is Eastman Kodak's Federal court victory in Pennsylvania.

In this instance, Eastman Kodak won legal protection against infringement of its familiar "yellow box," for more than 50 years identified with its products and currently used, along with red or black or both colors, in the packaging of more than 10,000 of its amateur photographic products. The defendant was the Royal Pioneer Paper Box Mfg. Co. of Philadelphia, which was found by the court to have been making and selling to film processors in competition with Kodak "deceptively similar" 8-mm. motion-picture-film boxes. ●

'Confusingly similar' appearance, color, design and trademark of competitive Vacation package won court protection for S. C. Johnson's Holiday packaging.



'Deceptively similar' yellow carton (right) used by film processors competing with Eastman Kodak (yellow box, left) resulted in permanent injunction against Royal Pioneer Paper Box.

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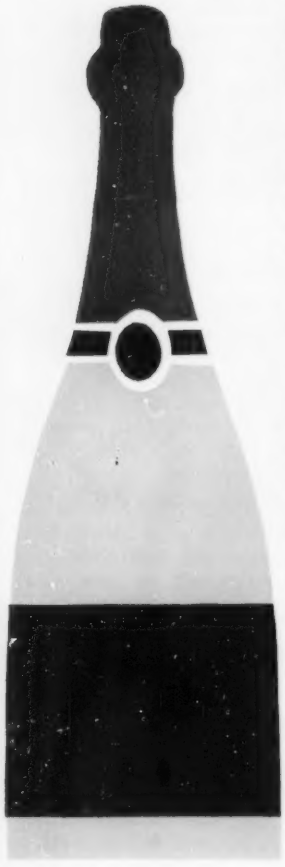

MODERN PACKAGING

The Complete Authority of Packaging—A BRESKIN PUBLICATION 770 Lexington Ave., New York, N. Y.

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Piloting the test market

[*Continued from page 97*]

Colgate Palmolive Co. to redesign its Fab package (just introduced), getting away from the metallic gold and former laminated-foil carton because feed-back data revealed that consumers felt the luxurious gold carton was "too high-toned" and thus did not regard the product as a heavy-duty detergent. In the detergent field, this was serious, because volume sales are in the heavy-duty products for washing-machine use. Just the same, Colgate credits the foil carton with stabilizing sales of Fab at the time when plastic bottles were coming in and all detergent powders were slipping. It also served its purpose by keeping others from getting there first with foil, says a company spokesman.

National Dairy to find out that the promotion of flavor variety in cottage cheese, packaged in standard paper containers, is a better sales builder than fancy re-use premium containers.

These days, a company doesn't have to be the size of a Colgate Palmolive, Campbell's or National Dairy to market test a package effectively. When lack of money prevents the use of professional research services, a company's own salesmen can often bring back valuable reports. Small firms are aided by business journals in their field, census information on incomes and other data.

National Food Marketers of Blue Anchor, N.J., processors of prepared frozen seafoods for the hotel and restaurant field, has recently entered the retail field. Its products, under the name, "Home Spot," are packaged in formed polyethylene trays with see-through window lids of transparent polyethylene-coated cellophane. Says Herman Shooster, vice president: "Market research has proved to us that no matter how attractive a package label may be, an actual look at the product yields better sales results."

How did he find out? By giving hundreds of samples to families and friends of employees, he says. And by market testing the packages in several dozen independent stores and supermarkets in the Philadelphia-New Jersey area, where sales and consumer follow-up could be observed closely by the company's own sales forces.

Bradford's Directory of Research Agencies lists the names of some 250 firms in the U. S. and in the world which offer services to marketers, with descriptions of what they do. Valuable guidance may also be obtained from the American Marketing Assn., the American Management Assn., the Assn. of Consulting Management Engineers, Inc., as well as other sources.

Whether a company has much or little to invest in a professional research program, it should be remembered that much information is available on generally established procedures and that there is every opportunity to spend the budget wisely if the objective is carefully analyzed. And, says a Midwest packager of hair products, money invested in sound research can definitely help a good package to succeed; it can save a fortune if it shows up a dud. ●

Rinso Blue in metered carton

[*Continued from page 103*]

than an ordinary detergent carton, principally for the extra board used to make the metering-device panel.

An added refinement is the easily accessible, sharply perforated tear flap positioned on the top and side panels directly over the measuring chamber. Complete instructions for use are printed prominently on the back panel of the blue, red, yellow and white package.

For the introductory approach, Lever salesmen were provided with sample packages containing a die-cut opening on the back panel, covered with a transparent film window, to reveal the entire chamber area. This permitted retailers to view the action of the measuring device inside the package. The regular consumer package, of course, does not have such a window.

The metered carton had its initial use in 1957 on a brand of detergent marketed by the carton developers as a test. Since then, the patent rights to the design have been taken over by one of the nation's largest board and carton firms, which intends to promote it aggressively. ●

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STERILKOTE Strippable Plastisols are formulated for roll coat or spray application. They are available in water-clear, transparent tints or opaque colors. Applied approximately 2 mils dry film thickness, they will bake at cycles of 1 to 1½ minutes at 500° F. for coil coating, or fuse at conventional bakes of 10 to 15 minutes at 375° F. for sheet coating or spraying. Other B-V "custom-formulated" chemical coatings furnish protection . . . decorative enhancement . . . or a combination of both to your product. For further details write or call direct.

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'Deception' pot boils

[*Continued from page 113*]

are broad packaged-product areas that lie beyond its scope, including soaps, detergents, polishes and many other big-volume consumer items. One of the big unanswered questions is whether such products will be subjected to the same intensified policing on packaging.

Authority to regulate the packaging claims of such products is in the hands of the Federal Trade Commission. Although FTC's chief activities concerning deception are in advertising media, it has a record of successful actions against slack-filled containers and labeling violations.

One of the weapons in FTC's anti-deception arsenal is the Wheeler-Lea Amendment to the Federal Trade Commission Act. Among its provisions is that it empowers FTC to proceed against improper advertising of packaged products—and this provision, says the agency, is broad enough to encompass improper labeling claims.

FTC has not, however, been as active as F&DA in proceeding against deception in packaging and labeling. One reason is that, for the sake of administrative efficiency, FTC consults with F&DA concerning all packaging and labeling violations it discovers in the food, drug and cosmetic area. Another is simply that FTC does not possess a full-time force of investigators and must rely for information largely on complaints from "injured" consumers and companies, and on reports filed by local Better Business Bureaus and similar organizations.

Nevertheless, FTC is keeping a sharp watch for packaging violations that come under its jurisdiction. The agency posted a representative at the Senate "deceptive-packaging" hearings in June and reports that he will be present at all subsequent sessions.

The steady, almost plodding, enforcement activities of F&DA and FTC are—or should be—of more concern to the packaging field than the headline-happy consumer complaints before the Senate Antitrust & Monopoly Subcommittee. A large number of major packagers of consumer goods are reported to be re-examining their quality-control operations (as a preventive against short-weight seizures) and package-

[*Continued on page 252*]

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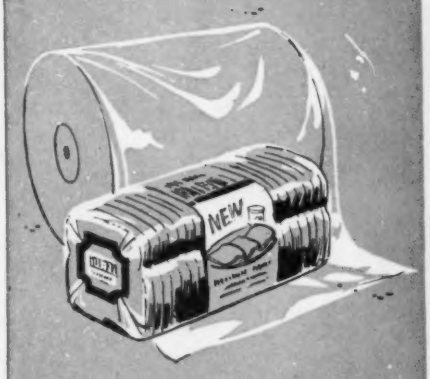
Tenite Polyethylene is a versatile plastic that solves many packaging problems. In extruded film, its high degree of sparkle and clarity has made it a favorite with both extruders and packaging users. In the form of squeeze bottles and other containers it results in virtually unbreakable "packages" of exceptional gloss. Light in weight, inert to most chemicals, resistant to moisture and moisture-vapor transmission, Tenite Polyethylene is dimensionally stable and remains flexible over a wide temperature range.

Tenite Polyethylene is available in a range of densities for injection molding, blow molding, or continuous extrusion; and in a wide range of colors and color concentrates.



Typical Packaging Uses: Film for produce, bread, and soft goods. Heat-sealable coatings and laminates for paper, film or foil. Virtually unbreakable bottles, boxes, jars, and closures.

BUTYRATE

Tenite Butyrate is an extremely tough, lightweight thermoplastic with excellent impact strength, high surface luster, resilience, dimensional stability, and good fabricating properties. It is easily lacquered, or decorated by hot stamping or printing; can be joined with a solvent cement; and resists the effects of most oils, greases, weak acids, and alkalies.

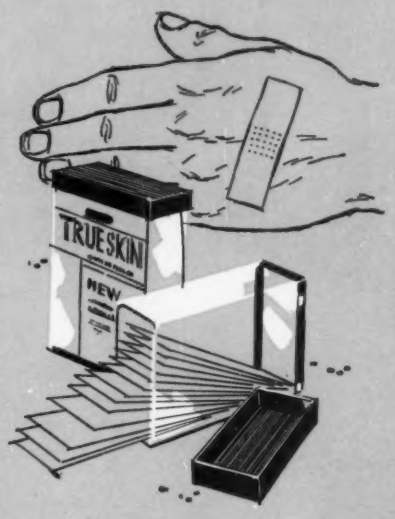
Tenite Butyrate is available in a wide variety of formulations and an almost unlimited range of transparent, translucent, opaque, metallic, and variegated colors, plus crystal-like clear transparent. It can be injection molded, blow molded, or continuously extruded as film, sheet or tubing. Sheet of Butyrate, moreover, can be rapidly and economically formed in sharp detail by the application of heat and vacuum, mechanical, or hydraulic pressure.

Typical Packaging Uses: Vacuum- or pressure-formed containers, blisters, bubbles, and skin packs. Rigid transparent and colored boxes, sleeves, tubes, vials, jars, and display components.

PROPIONATE

Tenite Propionate is a cellulosic plastic with physical characteristics that, in general, range between those of Tenite Acetate and Tenite Butyrate. These include good strength and fabricating properties.

Tenite Propionate is available in a variety of formulations and colors ranging from clear transparent to opaque. It is adapted to rapid injection molding, blow molding, extrusion, and vacuum forming, producing parts of high surface luster.



Typical Packaging Uses: Cosmetic and jewelry cases, jars, boxes, sleeves, closures, vials, blister and skin packs.

Planning the best package for your product includes finding the best material for your package. In making a selection, designers like to choose from the broadest possible range of properties.

This step is expedited by the six TENITE plastics—Butyrate, Acetate, Propionate, Polyethylene, Polypropylene, and Polyester—each available in a wide variety of formulations. So many materials and properties at one source make for fast, easy selection. And the Eastman technical representative can give helpful advice on the best combination of packaging features for your needs.

Such requirements may include flexibility or rigidity... transparency or opacity... printability... moisture barrier characteristics... or other special properties. If color is important, you can select from more than 42,000 colors and color effects available from Eastman in Tenite plastics.

A good starting point is to call your Eastman technical representative. You'll find his office listed under "Plastics—Tenite" in the classified telephone directories of the following cities: Atlanta, Chicago, Cleveland, Dallas, Dayton, Detroit, Greensboro (N.C.), Kansas City, Leominster (Mass.), Los Angeles, Minneapolis, New York City, Philadelphia, Rochester (N. Y.), St. Louis, San Francisco, Seattle, Toronto.

EASTMAN CHEMICAL PRODUCTS, INC.

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ACETATE

Tenite Acetate is the original Tenite plastic, and offers the packager a wide range of desirable properties such as toughness, light weight, impact strength, surface luster, low heat conductivity, and good fabricating properties. It can be easily joined with a solvent cement, is readily lacquered for decorative purposes, and resists the effects of most oils, greases, weak acids, and alkalies.

Tenite Acetate is available in a variety of formulations and almost unlimited colors plus crystal-like clear transparent. It is adapted to fast injection molding or continuous extrusion, and sheet of Tenite Acetate forms readily with vacuum or pressure, on simple equipment, in short, economical cycles.

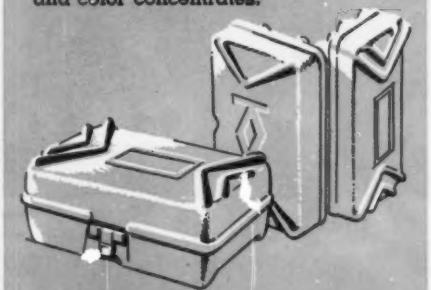
Typical Packaging Uses: Metal-decorated lipbrush cases and other tubular containers, transparent and colored boxes, sleeves, vials, jars, and closures. Vacuum- or pressure-formed containers, blisters, bubbles, and skin packs.

POLYPROPYLENE

Tenite Polypropylene can be easily extruded into brilliantly clear, tough film; injection molded into glossy containers; or blow molded into virtually unbreakable bottles. Virtually inert chemically, it is also resistant to moisture and moisture-vapor transmission, has low permeability to gases, mineral and vegetable oils, and is dimensionally stable. In addition, Tenite Polypropylene is heat-sealable. It has excellent draw-down characteristics for skin and blister packaging, and adheres to uncoated board. Polypropylene is among the lightest of all solid plastics.

High flexural strength permits designing one-piece Polypropylene containers with a "built-in hinge".

Tenite Polypropylene is available in various formulations for continuous extrusion, injection molding, or blow molding; and in a wide range of colors and color concentrates.



Typical Packaging Uses: Closures and molded or extruded containers. Film for food, textile, and industrial products. Skin and blister packaging. Blown bottles.

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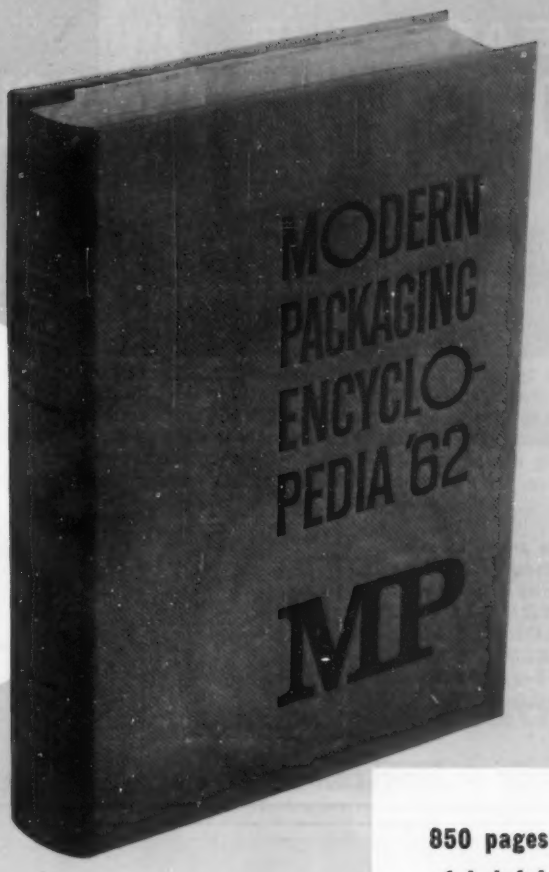

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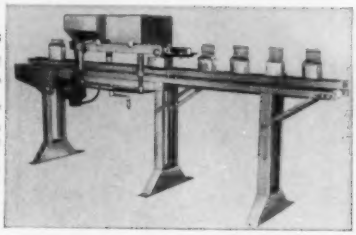

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[*Continued from page 246*]

surface designs (in order to avoid the possibility of Government citation on the broad charge of inconspicuous labeling).

At the same time, packaging-field associations are considering some form of self-regulation as an effective method of relieving the accumulating pressures from Washington. Since a great many of the complaints about packaging—both in the Hart hearings and in Federal-agency actions—are on the size and placement of contents statements, the thinking of these organizations is to establish reasonable standards for such information. Along these lines, the Packaging Institute's recently formed Special Committee on packaging and labeling practices has informed Sen. Hart that it will shortly submit a statement in answer to consumer charges raised at the June hearing and a list of recommendations to its members. The document may lay the groundwork for a voluntary industry code of improved packaging practices.

A possible guide to acceptable practice is the new Model State Law for package labeling weights and measures, which was endorsed by some 400 delegates representing State and Federal agencies at the the National Conference on Weights & Measures in June. The model law reads, in part:

"Any commodity in package form introduced or delivered into or received in intrastate commerce shall bear on the outside of the package a definite, plain and conspicuous declaration of (1) the identity of the commodity; (2) the net quantity of the contents in terms of weight, measure or count, and (3) the name and place of business of the manufacturer, packer or distributor." A further provision of the model law forbids the use of qualifying terms (such as "jumbo" and "giant") that tend to exaggerate the amount of product in the package. ●

CORRECTION: In a news item on page 156 of the September issue of MODERN PACKAGING, Allen C. Staley, Jr., was incorrectly identified as Chicago district sales manager of The Lord Baltimore Press, New York. Mr. Staley actually is the company's vice president for sales. The new Chicago district sales manager is George Wohlgemuth.

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FOR SALE PACKAGING EQUIPMENT—Package Machinery Company Model FA4 Overwrap Machine equipped with belt infeed, electric eye, side belt discharge, Taflon Heater Plates complete with drives rated speed 35 to 65 pks per min. Automation weighers and filler machines Model M2 as manufactured by Wright Machine Company. This equipment was used for boxing and bagging charcoal briquettes. It also includes F21 Syntron Vibrating Feeders, Tape dispensers, Frazier Model B-1 Bag Filling Machine, Hoppers and Conveyors. This equipment is located at Iron Mountain, Michigan. If interested, write Reynolds Metals Company, 6601 West Broad Street, Richmond, Virginia—Room 222.

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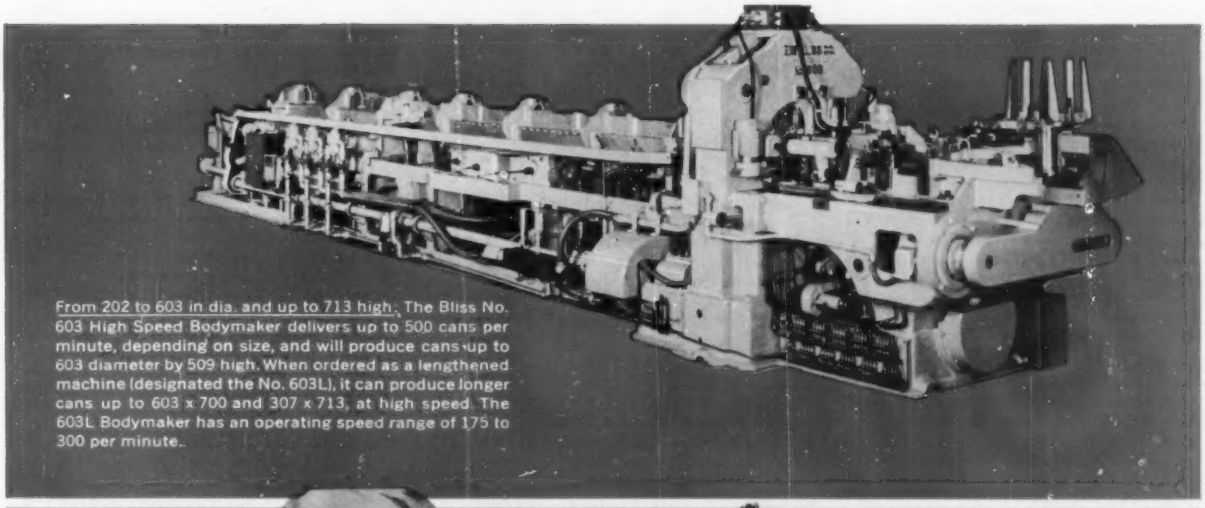

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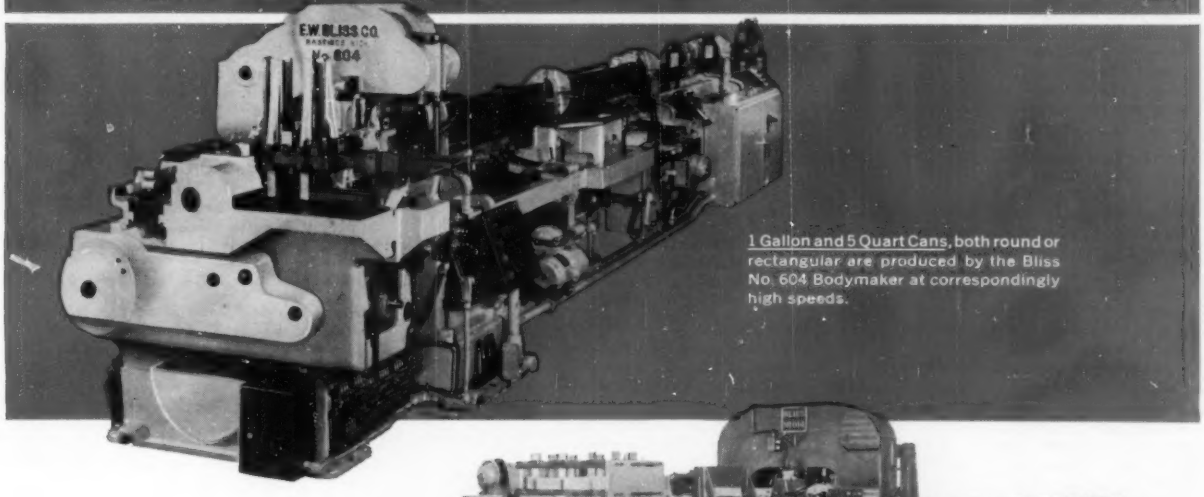

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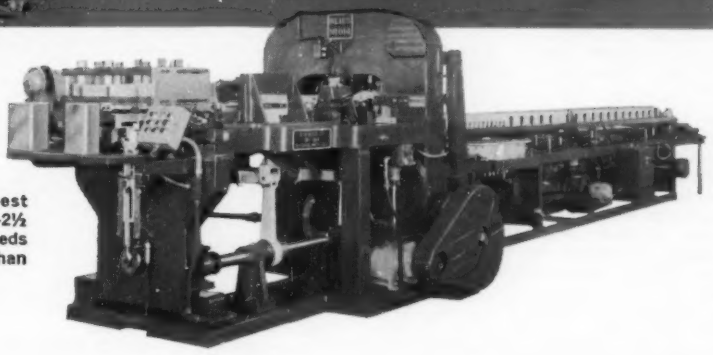

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INDEX TO ADVERTISERS

October 1961

Distribution of this issue: 33,700

Acme Steel Company 220
Allied Chemical
General Chemical Div. 38, 39
Semet-Solvay 60
Aluminum Co. of America
Closures Div. 18, 19
Foil Laminations 167, 168
Amalgamated Lithographers of America 71-74
American Can Co.
Marathon Div. 11
American Cyanamid Company
Dyes Dept. 258
Plastics & Resins 90
American Machine & Foundry Co. .. 79
American Viscose Corporation
Film Division 134
Anaconda Aluminum Company 203
Anchor Hocking Glass Corp. .. 170, 171
Arabol Mfg. Co., The 89
Arenco Machine Co., Inc. 222
Armstrong Cork Company 40
Auto Wrappers Ltd. 232
Avery Label Company 186
Avisun Corporation 87, 231

Ball Brothers Co., The 139
Bartelt Engineering Co., Inc.
A Sub. of Riegel Paper Corp. 36
Battle Creek Packaging Machines, Inc. 53
Beck, Charles, Machine Corporation 234
Bell-Mark Corp. 219
Bemis Bro. Bag Co. 151
Bliss, E. W., Company 255
Bradley & Vrooman Company 245
Bradley Industries, Inc. 207
British Cellophane, Ltd. 174
Brown Company 37
Burt, F. N., Company 133

Cady, E. J., & Company 194
Cameo Die & Label Co. 202
Cameron Machine Co. 23
Celanese Corp. of America 144
Cellu-Craft Products Corporation .. 17
Chanal Plastics, Inc. 218
Chase Bag Company 59
Clark, J. L., Manufacturing Co. 195
Classified 254
Cleveland Container Co., The 213
Coated Products, Inc. 238
Consolidated Packaging Machinery Corp. 242
Continental Can Company .. Back Cover
White Cap Division 110, 111
Creative Packaging, Inc. 46
Crompton & Knowles Packaging Corp. 4

Davis, Joseph, Plastics Co. 7
Dennison Mfg. Co. 10
Diamond National Corporation
Gardner Division 172, 173
Dillon-Beck Manufacturing Co. 230
Dobeckmun Company, The,
A Div. of Dow Chemical Co. 5
Doughboy Industries, Inc. 29
Dover Molded Products Co., Inc., The 235
Dow Corning Corporation 178
Downington Paper Co. 247
DuPont de Nemours, E. I., & Co. (Inc.)
Electrochemicals Dept., Elvax .. 76, 77
Film Dept., Cellophane 160, 161
Film Dept., Packaging Sales . 236, 237
Freon ..... Inside Back Cover
Polychemicals Dept., Alathon . 24, 25
Dyn Corporation 212

East Texas Pulp & Paper Co. .. 220A, B
Eastman Chemical Products, Inc.
Chemical Div. 30
Plastic Div. 248, 249
Enjay Chemical Co., A Div. of Humble Oil & Refining Co. 211
Erdco Engineering Corp. 202

FMC Packaging Machinery Div.
Canning Machinery Div. 26
Stokes & Smith Plant 175
Fenwal, Inc. 22
Fibreboard Paper Products Corp. .. 257
Flex-O-Glass Inc. 241
Fluid Chemical Co., Inc. 50
Fry, George H., Company 252
Fuller, H. B., Co. 63

Gaylord Container Div.,
Crown Zellerbach Corp. 55
Goodrich-Gulf Chemicals, Inc. . 176, 177
Goodyear Tire & Rubber Co. 1

Hamac-Hansella Maschinen GmbH . 47
Hamersley Mfg. Co., The 207
Harcord Manufacturing Co., Inc. .. 57
Heinrich Equipment Corp. 16
Hinde & Dauch, Division of West Virginia Pulp & Paper Co. 66
Huntingdon Industries, Inc. 242

Independent Die & Supply Co. 222
Injection Molders Supply Co., Inc. 235
Inland Container Corp. 75
Inpak Systems Inc. 15
Interchemical Corporation
Printing Ink Division 233
International Paper Co. 21
Lord Baltimore Press Div. 187

KVP Sutherland Paper Co. 82
Kaiser Aluminum & Chemical
Sales, Inc. 27, 28
Kidder Press Co., Inc. 191
Kimberly-Clark Corp. 181
Kisco-Bip Corp. 190
Kleen-Stik Products, Inc. 78
Knox Glass, Inc. 129
Koppers Company, Inc.
Plastics Division 8, 9

L.A.B. Corporation 215
Lermer Plastics, Inc. 169
Lord Baltimore Press, Div.
International Paper Company ... 187
Lowe Paper Company 227

MA System 189
MRM Company, Inc. 241
Main, Chas. T., Inc. 215
Marathon, A Division of American Can Company 11
Mason, F. E., & Sons 238
Massillon Container Co. 228
Milprint, Inc. 45
Minnesota Mining & Manufacturing Co., Chemicals Division 188
Mobay Chemical Company 240
Modern Packaging 244
Modern Packaging
Encyclopedia ..... 234A, B, 250, 251
Monarch Marking System Company, The 14
Monsanto Chemical Co.,
Plastics Division 84, 85

Nashua Corporation 92
National Instrument Co. 206
National Starch & Chemical
Corporation ..... Inside Front Cover
National Tag Co., The 243
Nevins Company, The 64, 65
Newbury Industries, Inc. 190
Northland Bag Corp. 221

Olin Mathieson, Packaging Div. 88
Oneida Paper Products, Inc. 12

Package Machinery Company 231
Permacel 239
Peter Partition Corp. 231
Photomation Inc. 206
Pittsburgh Plastics
Div. Heekin Can Co. 166
Plastene Corporation 179
Plastic Assembled Products, Inc. ... 157
Plastofilm Inc. 252
Plax Corp. 201
Plaxall Inc. 155
Pneumatic Scale Corp., Ltd. 199
Pratt Manufacturing Corp. 222

Resina Automatic Machinery
Company, Inc. 215
Rexall Drug & Chemical Company,
Film Div. 159
Reynolds Metals Company 13
Rhinelander Paper Company
Div. of St. Regis Paper Co. 163
Richardson Taylor-Globe 223
Riegel Paper Corporation 31-35
Bartlett Engineering Co., Inc.
A Subsidiary 36
Risdon, Manufacturing Co., The ... 164
Rowell, E. N., Co., Inc. 198

St. Regis Paper Company
Folding Carton Div. 48, 49
Rhinelander Div. 163
Scandia Packaging Machinery Co. .. 6
Scott Paper Co., Hollingsworth & Whitney Div. 208
Seal-Spout Corp. 226
Sheffield Tube Corp., The 216, 217
Simco Company, The 196
Standard Packaging
Corporation 204, 205
Star Aluminum Co., Ltd. 182A
Steigerwald, A. M., Co. 51
Stokes & Smith Plant
FMC Packaging Machinery Div. . 175
Swift & Company 253

Thilmany Pulp & Paper Company .. 185

Union Carbide Corporation
Union Carbide Plastics Co., Div. 152, 153
Visking Co., Div. 234
United Shoe Machinery Corp. 229
U. S. Automatic Box Machinery Co., Inc. 214
U. S. Industrial Chemicals Co. ... 69, 70
United States Steel Corp. 224, 225

Verner, B., & Co., Inc. 246
Vertrod Corp. 196
Visking Co. Div. of Union Carbide Corp. 234

Warner Bros. Company, The 197
Warren, S. D., Company 183
Weldotron Corporation 165
West Virginia Pulp & Paper Co.
Bleach Board Div. 42, 43, 193
Hinde & Dauch Div. 66
Kraft Div. 158
Western Gear Corporation 86
White Cap Co.
Div., Continental Can Co. ... 110, 111

Youngstown Sheet and Tube
Company, The 80, 81

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A BREskin PUBLICATION

Published by Modern Packaging Corp., 770 Lexington Avenue, New York 21, N.Y.

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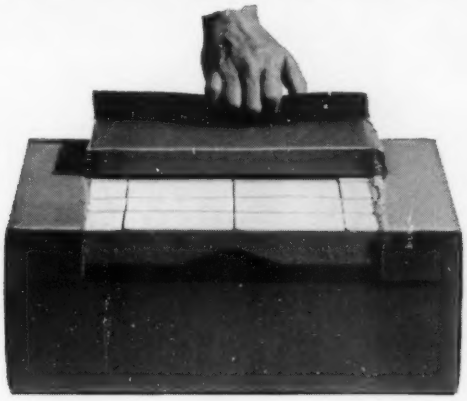

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3 **Zip Ease,** the tape-joint shipping case. Pop the end flaps; the top zips open with a special tear-tape. (Closes neatly for storing, too.)

A Fibreboard specialist in *your* industry can help you get increased convenience with end-loading cases. (Plus maximum cost advantages, too.) How? To get information is as easy as writing: **Fibreboard Paper Products Corporation,** 475 Brannan Street, San Francisco 19.

"Built-in Color" means Built-in Sell

*CYANAMID'S DESCRIPTION OF PACKAGING BOARD PRECOLORED DURING MANUFACTURE.

Color is the newest "plus" in shipping containers. For bright, eye-catching container colors at lowest cost, try Cyanamid's new line of "Built-in Colors." These colors are added during manufacture, **not** printed afterward, so the printer has even greater flexibility. "Built-in Color*" can save your customers money and prove to be an **active business-builder for you!** • **SEND FOR** our new brochure which illustrates 30 Cyanamid-formulated "Built-in Colors" for shipping containers. Each color and coordinated printing ink is recommended by Howard Ketcham, noted color authority and Cyanamid consultant. Let this brochure be **your** guide to new sales opportunities! • American Cyanamid Company / Dyes Department / Bound Brook, N. J. / Headquarters For Paper Colors Since 1870

CYANAMID

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Aerosol packaging isn't kid's stuff. It has boosted sales for dozens of products in many industries. It's so convenient—no wonder shoppers all over the country are buying more products in aerosol form.

If you're interested in investigating aerosol packaging for your product, Du Pont can offer immediate assistance. With more than 30 years' experience in fluorocarbons, we can tell you whether your product is adaptable . . . what shape the aerosol package should take.

Complete technical assistance and marketing facts are available without obligation. We'll also supply the names of qualified custom loaders who can package your product for you—to keep your investment in equipment at a minimum.

Write for free booklet "Package for Profit". . . it has the entire story. Du Pont Company, "Freon" Products Division, N-2420PC, Wilmington 98, Delaware.

Best-selling aerosols are powered with **FREON®** propellents

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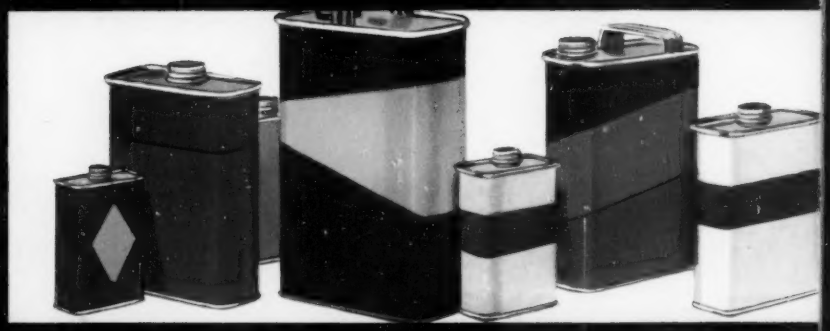
NO MATTER HOW YOU LOOK AT IT CONTINENTAL HAS THE RIGHT "F" STYLE CAN FOR YOU



Top and bottom, front and back, Continental's "F" style can has features you want:

- Hinged plastic Flip Cap®, inserted without solder or flux marks, allows clean, eye-catching lithography on top.
- Broad, flat sides give ample room for your brand name, individual design and sales message.
- Recessed well on the bottom makes for easy stacking, firm displays and neat shelving.

At Continental's Technical Center in Chicago, an army of researchers are always at work creating new containers to meet new demands. Serving you better, fitting our product to yours, has made Continental a design leader in the packaging field. That's why we can say—Whatever you package, whatever you produce, Continental has the right container for you.

CONTINENTAL CAN COMPANY

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